

CALIFORNIA'S REDWOOD WONDERLAND

Humboldt County



by
D. L. Thornbury

CALIFORNIAN



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EEL RIVER CANYON

Here a temple to God has been raised,
Bejewelled by sparkle of riffle and
Golden Gleam of sandy bar, girt by towering
Steeples and encircled by forested hills.



California's Redwood Wonderland Humboldt County

By
D. L. THORNBURY



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CHAPTER I

HUMBOLDT COUNTY



IN those who have lived once in Humboldt County, a peculiar attachment, almost a patriotism, is generated, which lasts their life time. Thousands of her sons have gone to other parts of the United States. Thousands have made Humboldt their home for a time and have left her. Thousands have come, settled, grown attached to the country and remained. Humboldt has in a way become a mother land, and much as old Greece sent forth her colonies, has Humboldt sent forth her sons and daughters to San Francisco, Los Angeles and other cities of California. Once a Humboldter, always a Humboldter.

In fact, Humboldt is a state by herself. Isolated for sixty years, forced to depend economically upon her own resources, communication only to be had by a rough and often times dangerous voyage; shut off from the rest of California by the natural barriers of the Coast Ranges; Humboldt has existed, a country—rich in resources, large in dominion and self-sufficient.

There is a weird fascination pervading Humboldt, which affects all alike. The purity of the gurgling brooks and streams; the beautiful rocks and pebbles over which they flow; the riffles glinting in the sunshine, and the long stretches of quiet pools; the forest reaching down from the hills on either side, caressing the waters with its individual trees; the soft balmy atmosphere, bringing contentment and rest; the radiant days; touch the senses of the wanderer with pleasing impressions.

Nor is it all sunshine that pleases. Her soft warm rains, during the winter months, evincing a determination to keep it up and do the job thoroughly, soak the productive soil, bringing forth extraordinary crops, and mantling the land with a carpet of green. There are no waste places or barren spots. The vast area is clothed with forest or with meadow.

How one loves the rains—prepares for them! Dress in your rainy day clothes; put on your rubbers, slicker or rain coat; grasp the trusty umbrella, and let it pour. The weary exile, in the dry and perpetual sunshine of other climes, panting for his native land, wonders what is the matter with him. The symptoms of trouble are easily read. His skin is dry, his eyes are red and inflamed, the webs between his fingers and toes itch, he has a nervous feeling. A duck out of water is the simile which applies to him. Longing will not cure him. What he needs is a winter trip to dear old Humboldt.

Fogs—cold, damp, light, warm, high in the sky, penetrating to the bone, wrapping you in warm fleecy water vapor, fogs of every kind and description must be expected. But oh! how the redwood loves the fog. He is her child. As she steals in from the ocean in the cool of the evening, she creeps up to her children and wraps her fingers and arms around them, clasping them to her bosom and nurturing them. In the morning, when the unending warfare between sun and cloud begins again, how reluctant the redwood is to release his mother! He holds her in his top. He presses his lips in farewell to her form. His fingers clutch at her skirts, until the sunshine pulls away the last shreds of her garment from his grasp. The tears of their parting are on every needle. Throughout the day they fall to the ground, soaked up by the greedy kerchief of forest mould.

Without the fogs Humboldt would be a bare and barren land. They form out in the ocean throughout the day, held back by the land breeze, hanging as a bank on the horizon. As night approaches, the wind changes. The ocean breeze drops to the surface of the land and sweeps the fog up the valleys of the coast, filling them with billowy masses. It strikes the forested hills, creeps up their slopes and reaching their summits, is blown down as a waterfall, in fleecy banners and streamers, into the valley below.

How little do we appreciate the high fog! When the hot days of summer come; when the rains have ceased; when the land breeze pours unceasingly its hot breath generated in the interior valleys of California; what gives us on the coast, respite? Borne on the high counter currents of the ocean breeze, are the fleecy masses

of the high fog, shading the sun, cooling the desert blasts, moderating the summer heat, bracing the air and making an energetic and capable people.

No need of cumbersome sunshade. A canopy hangs across the sky. Sunshine and warmth may appeal to one for a time, but the soothing effect of our moderate temperature need but to be advertised, and thousands of people with nervous tendencies will come to Humboldt.

But it is not all fog and rain. The most beautiful months of the year are November and December, between the early and the last rains. The atmosphere has been cleared. The blue mountains march down closer. The heights grow more and more distinct. The deep shadows merge into canyons and ridges. The azure Pacific lies spread out before you. The golden colored sand dunes and beaches are laved by the white combers of the sea. These are the scenes that nature spreads before her lovers. The fogs are seldom of long duration. Uncomfortable days are rarely more than two or three at a time. They bring the tang of the ocean and the fresh salt sea breeze and are enjoyed and welcomed by the people. When they cease, in August and September, the hottest days of the year are at hand. Then Humboldt feels the warm breath of summer and the first rains of October are a welcome relief. The rains stop in March. The ground bursts forth with luxuriant growth, and the beautiful days of spring, which last during April, May, June and July are at hand.

Who says the climate in Humboldt is monotonous? True, the variations of temperature are only a few degrees each day; the great expanse of ocean is the moderator. Snow is unknown in the lower valleys, but it lies on the hills only four miles away and the winds that blow down from the slopes of the mountains give the bracing effects of Jack Frost during January and February.

Humboldt County as a whole is a mountainous land. Numerous spur ranges of the Coast Mountains run southeast and northwest, giving rise to streams whose basins are for the want of a better term called valleys, and are named after the principal rivers.

Counting from the southern line of the county, which is the fortieth parallel of latitude, to the northern line, we find the fol-

lowing rivers and their attendant valleys—Mattole, Bear River, Eel River, Elk River, Mad River, Little River, Redwood Creek and the Klamath-Trinity River system.

In the summer of 1905, in the old Pomona, I made my first trip to Eureka and my first sea voyage. Many times since I have made the journey. From the coast the country appears much more barren and rough than it is in fact. This is due to the King's Peak Range and the Cooksie Range, which rise abruptly from the ocean to a height in many places of four thousand feet. There are several distinct peaks in the range such as Horse Mountain, Fire Hill, Shubrick, Hadley and Kings Peak. The greater part of these peaks are bare of trees and are not two miles from the coast, giving the country a forbidding and precipitous appearance and masking the beautiful and lovely country inland.

King's Peak (elevation 4,269 feet), is the highest of the peaks and lies a considerable distance from the ocean and the best view of this beautiful mountain is to be obtained from the Mattole Valley. It gives its name to the range, which is the youngest range of the mountains in point of geological time in Humboldt County. It was probably thrown up from and emerged out of the ocean only about three million years ago, during the Post Miocene or Cenozoic Eras. For fifty miles north of the Humboldt-Mendocino County line there is but one harbor, called Shelter Cove, and it is an open roadstead and has a heavy swell.

Parallel with and nowhere more than ten miles from the coast line runs Mattole River, considerably over a hundred miles long, with only about ten miles of its course outside the county. The direction towards which the river flows is generally northwest, but it follows a most crooked path between the numerous side Spurs of the enclosing mountains. On the east side of the Mattole Valley is the range known as Rainbow Ridge which is nowhere more than three thousand feet in elevation above sea level and is on the average not much over one thousand feet, its highest point being known as Rainbow Peak. Rainbow Ridge runs into the ocean at a point known to all students of geography as the westernmost portion of the United States. Cape Mendocino is the ultimate west. Here at the cape, but separate from the mainland, is a

large rock rejoicing in the common name of Sugar Loaf Rock. This range of mountains runs still further out into the ocean but beneath the water, coming near the surface in a dangerous ledge known as Blunt's Reef. Here a light-ship is anchored at all times and our boat stops to give mail to these isolated light tenders.

The next range, traveling north, is the Bear River Ridge which sinks beneath the Pacific's waves at a point called Cape Fortunas, which is a miniature replica of Cape Mendocino, even having a sugar loaf rock at the extreme point.

One of the peaks of this Bear River Range, is Mount Pierce, (elevation 3,270 feet) which from its commanding position and its location near the center of Humboldt County as it was originally organized, was selected by the United States Government as the point of reference for the land surveys. Humboldt base line and meridian line begin and cross at the top and are marked with a monument of four iron bars from which the mountain often takes the name of "The Monument." Coming up the coast on one of the steamers from San Francisco, one sees Mount Pierce standing out clearly, and during the rainy season it is generally covered with snow and easily distinguished.

A small spur runs off Bear River Ridge to the northwest called "The Wildcat," the roughest and most broken portion of Humboldt County. North of the Wildcat is lower Eel River Valley, which is a real valley in the true sense of the word. Here the mountains have retreated from coast. An old estuary or bay, which was triangular in shape, has been filled by the enormous mass of detritus brought down by the extensive watershed which is drained by Eel River and its tributaries.

Lower Eel River Valley is about twelve miles wide at the base of the triangle, which is the ocean side; and is about twenty miles in length, bordering the banks of the river. It is the largest piece of level land to be found in Humboldt and is extremely rich, the soil being river sediment, and consequently is the most valuable agriculturally and the most highly developed section of the country. Bordering lower Eel River Valley on the north is a low range of hill land, really a mesa, known as Table Bluff.

North of Cape Mendocino for a distance of over forty miles the land along the Pacific is comparatively level. The mountains lie about twelve miles to the eastward and the coast line becomes low and sandy and is composed of some splendid beaches. The surf breaks against the strand and for this reason Humboldt Bay was not discovered at an earlier period of history. Just north of Table Bluff lies Humboldt Bay, fourteen miles long and one or two miles wide. A narrow strip of sand about four miles long called the South Spit, separates the waters of the Pacific from South Bay. The entrance to the harbor is a quarter of a mile wide and is being improved by jetties to deepen the channel.

A strip of sand about half a mile wide and seven miles long, known as the North Peninsula, lies between the Pacific Ocean and the upper part of Humboldt Bay. Bordering Humboldt Bay on the north is a low level plain called the Arcata or "Mad River Bottom" which has been formed from the river deposits of Mad River, which here empties into the ocean.

Undoubtedly Humboldt Bay once extended about six miles further north than it does now, and the northern portion has been filled in by the detritus brought down by Mad River, and thus Arcata Bottom has been created. In fact, the process is still going on. At seasons of flood, Mad River flows into Humboldt Bay, as well as into the ocean. All the northern portion of the bay is very shallow and four feet rise in the surface of the land would lift the northern portion of the bay above the surface of the water.

Low hills and table lands succeed one another as we sail further north. At the mouth of Little River is one of the finest beaches. The sight of Trinidad Bay, Neck and Head, two miles north is one of the most beautiful of ocean views to be found anywhere. The beach is shaped like a scimitar, and the bay is dotted with innumerable islands. They are mostly black rocks, impregnated with iron ores and are the remnants of the former mainland which has been washed away by the incessant waves of the ocean. The surf rolls in from the unobstructed expanse of the Pacific and washing against these rocky islets, breaks over them against the black of the islands. Trinidad Head is an enormous rock about 380 feet high and contains about 600 acres. It is connected with a

mainland by a narrow low strip of land called Trinidad Neck, and doubtless at one time, ages ago, it was an island. It is the property of the Government and is the site of a light house. North of the Head, the coast line for three miles is dotted with islands.

Geologically, the northern portion of the country beyond Trinidad is entirely different from that of southern Humboldt. It is much older in point of time, is heavily mineralized and the rocks have been metamorphically altered and subjected to igneous action and enormous pressure.

That part of Humboldt, south of the Bay and west of Eel River and its south fork is mostly sedimentary in character and is stratified, although folded and faulted. It has not been subject to igneous action and evidently was submerged beneath the ocean when the northern portion was land and being subjected to volcanic and erosive forces. Consequently the northern portion along the coast is not so rough and high, while still mountainous in character. What might be considered mountains are covered with redwood timber, from almost the waters edge to the heights of every hill, and the forest extends for fifty miles north of Humboldt Bay in an unbroken belt.

Just north of Trinidad is a level mesa nearly four miles in width which terminates at Patrick's Point. Here begins a stretch of country which might be termed the Land of the Lagoon. The hills extend in six or seven spurs out into the ocean, and at one time in the geological history of Humboldt, held small bays between the ranges. A strong ocean current, heavily loaded with sand, runs off-shore in a northeasterly direction; and rounding Patrick's Point it touches the tips of these mountain spurs. In the course of time it has deposited a strip of sand and completely enclosed the old bays, forming Big Lagoon, Stone Lagoon and Fresh Water Lagoon, which occupy a frontage along the ocean of ten miles.

Just beyond Freshwater Lagoon, is the mouth of Redwood Creek and its valley enclosed by the forested hills. A low ridge which is the continuation of the Hoopa Mountains further inland, terminates at the ocean's edge in Gold Bluff. This ridge divided the basin of Redwood Creek from that of the Klamath. Although the Klamath River enters the ocean at a point five miles north of

the northern boundary of Humboldt County, it is Humboldt's principal river system, since it drains considerably over two-fifths of the surface of the county.

Such is the appearance of Humboldt from an ocean voyage along its coast. Inland, its valleys head together. The spurs join each other and finally outside the country's eastern border merge with the main mountain system of the Coast Range.

The Hill Country, about fifteen or twenty miles back from the ocean and just east of the redwood and pine forest belts, is the grazing section of Humboldt County. The soil in many places is several feet deep on the top of the ridges which are almost level and flat. Here luxuriant grasses grow, and support the industry of stock raising. Large ranches, comprising several thousand acres each, handle the business. One-sixth of the area of these ranches will be found to be suitable for agriculture, as the land is comparatively level; the soil deep, and the rainfall abundant. Tracts of fifteen hundred acres of such land in one body will often be found.

Nestled in between the ridges, along the courses of the rivers throughout the county, are thousands of flats, ranging from a few acres to hundreds, suitable for any kind of agriculture. Their soil is made up of inexhaustibly fertile river sediment. Here are the future home sites for the farmers of Humboldt.

CHAPTER II

EUREKA



UREKA is laid out upon a low lying plateau, bounded by the waters of Humboldt Bay on the west and north. On the east it is bordered by a bayou which is subject to tidal flow, called Ryan's Slough, and on the south it is bounded by the drainage system of Elk River. The tributaries of these streams, following low, deep gulches, converge close together about four miles from their mouths, thus furnishing a natural boundary to the city limits of Eureka.

A long low ridge, following the southeast and northwest direction of all the ranges in Humboldt County, is the general divide between the branches of Ryan's Slough and Elk River. This ridge is an offshoot running down from Kneeland Prairie and has broadened out and become low as it approaches Humboldt Bay, forming a plateau or mesa sloping in four directions where it is used as the townsite of Eureka.

A few streams drain this area and have cut small gulches along their courses. They can be numbered on the fingers of one hand and are not deeper than thirty feet, or more than a hundred feet wide. In fact, they furnish natural drainage.

The general elevation of this plateau is about eighty feet above sea level, running from about thirty feet in the northern business section to one hundred and forty feet in the southern residence districts. Roughly, Eureka is about four miles north and south, and three miles east and west, giving an absolutely level surface of twelve square miles on which to build the future metropolis of northern California. By no means is all this district settled although there were a little over fourteen thousand people living in the city on January 1, 1923. The thickly settled district is comprised within about one square mile of territory, running back from the bay shore a mile and a half. The rest of the town site has

been fully surveyed into town lots, so there is plenty of room for expansion.

The best general view of Eureka is obtained from the steamers. The entrance to Humboldt Bay is five miles south of the city and the bay is only half a mile wide, so as the steamer comes up the bay and turns east to the wharves, a comprehensive idea of Eureka can be obtained. The same fine view is seen from any part of the north peninsula to the west, which separates the waters of Humboldt Bay from the Pacific.

The blue turquoise surface of the bay is as smooth as a lake. It is dotted with every form of water craft, boats, yachts, launches, ferries, schooners, sailboats, coastwise passenger ships and ocean going tramp steamers. The smoke from the lumber mills—Carson's on the east, The Occidental, The Bayside, and The Holmes-Eureka, together with smoke from the foundries and other manufacturing plants rises high along the water front, disappears in the air, and does not obstruct the view. Low tide lands, reclaimed by the railroad embankments along the bayshore, are green with grass and occupy a strip on the western edge of the city about a thousand feet wide.

This is the lawn on Eureka's front door, and the setting for the city of opportunity. Back of the tide lands is a bluff rising abruptly thirty or even more feet, and on it is situated the city. The majority of the buildings are painted white. The churches, the old high school, the court house, and the business blocks of the down town section, stand out above the cottages and homes. The land gradually rises, giving a much larger appearance to Eureka than it really is. Twelve miles away, in the back ground, are the purple masses of the forest clad mountains. In the clear days of December just after the first rains have cleansed the atmosphere of its smoke and perhaps have mantled the "prairies" on the tops of the hills with snow, how beautiful is Eureka and how beautiful is its setting. No diamond sparkling in a setting of amethyst, turquoise, and emerald charms the eye more than Eureka in those glorious days of mid-winter.

The city of Eureka is a modern place with paved streets, gas and electric lights, an electric car service, a municipal water system,

a Polytechnic High School in a new building, extensive manufacturing plants, a ferry system across the bay to the peninsula and other points; five lines of railroads entering the city, with a magnificent harbor whose entrance is being improved at a cost of millions of dollars; and with rail connection with the outside world when the Northwestern Pacific Railroad completed the gap in October, 1914. It is the principal commercial city in northern California and is the gateway through which pass the products of territory larger than Pennsylvania, and not limited by the boundaries of Humboldt County.

In the business section all the streets are paved with asphalt, something over one hundred and sixty city blocks of this kind of pavement, have already been laid. In the residence districts, all the principal streets have been graded and turnpiked with crushed rock, and on nearly all of the minor streets some improvement work has been done.

Electricity is obtained from the water power generated from the south fork of Trinity River, fifty miles east, and brought to the city over the power line across the mountains. This source of electricity is supplemented by three local power stations. The gas plants are maintained by the same corporation. The rates are moderately low, and cheap electric power can be obtained for manufacturing. The street car system, owned by the municipality, has over fifteen miles of tracks running through the thickly settled portions of the city.

The streets running north and south are named after the letters of the alphabet and the streets running east and west are numbered. When the alphabet is exhausted, recourse is had to other names and after Sixteenth Street, the names of the pioneers of Humboldt were used. The street cars run on Broadway, A, E, and J Streets, from the water front south two miles to Harris Street. Running east and west, they used Second Street and Fifth Street which has an extension on Myrtle Avenue, for two miles east to the city limits. The Summer Street line runs out the old county road to the south and west city limits and furnishes transportation to the Bucksport district, the lumber mills and manufacturing plants along the western water front of Eureka.

The E Street car line turns east on Harris street and then south to Sequoia Park, located in the southeastern portion of Eureka. Here fifty acres of virgin redwood timber which formerly covered the whole townsite of Eureka have been reserved and set apart as a park. The street car ride to Sequoia Park is about four miles long, and the park certainly repays anyone visiting it. A large sum of money is expended in improving the park, cutting paths and making driveways; but never so far as possible altering the natural wildness and the primeval beauty of the redwood forest. It is a beautiful spot and owes its preservation to the fact that the timber lay in a low lying gulch drained by a branch of Elk River and that the timber was not of the finest type. One can well spend an afternoon in Sequoia Park and not exhaust its beauties.

Eureka owns its own water system and the supply is obtained from pure mountain streams, tributary to Elk River. On account of flowing through redwood and other timber, over a soapstone formation, a slight discoloration of the water takes place. This does not harm the water, as it has been pronounced absolutely pure. The source of supply is and always will be far from any habitations, and on account of its nearness to the city, the cost of maintenance is extremely low. The sewer system is extensive and the sewers run far out into the bay where the current leading out to the entrance sweeps it into the ocean. The elevation furnishes the proper fall for rapid drainage of storm water and on account of the abundant rainfall the land is washed thoroughly clean every year. The trades from the Pacific are the prevailing winds, and a constant supply of fresh uncontaminated air, charged with ozone and salt is to be had for the effort one exerts when breathing.

The sanitary conditions of Eureka are naturally perfect, and the health of the inhabitants abundantly testifies to this. I doubt if there is in the United States a more physically perfect set of children, and this is especially true of the girls. A wide swinging step, walking from the hips with body erect, is the natural gait of the youth of Eureka. A perfect ruddy tinted glow of health on the face and cheeks is the natural complexion.

Eureka people are noted for their complexions. A soft texture of skin and good color is prompted during winter and summer.



CITY OF OPPORTUNITY
Eureka—I have found it.

Wrinkles are prevented by the slight changes in temperature, for Eureka has less annual daily variation of temperature according to the weather reports, than any other city in the United States.

The even temperature, the mild winters, the moisture of the fogs, lead to moderation in living that is conducive to longevity. The number of old people over seventy and eighty years among the present population is astonishing, and they are tenacious of keeping in the business harness and refusing to be put on the shelf. About the most common remark to be heard from the younger set or the newcomer is, "What Eureka needs is several first class funerals." But the old men individually and collectively refuse to furnish the chief attraction and make a Roman holiday. They keep on getting up at five o'clock in the morning and doing two days' work in one; tending to their business; getting themselves elected to the city council and other offices; taking things moderately, and going to bed at an early hour and enjoying themselves.

The climate of Eureka is not the finest in the world, and it should not be classed as a future resort city. It is a commercial center. It has a better climate than London, almost the same as that of San Francisco, and better than the climate of New York, Chicago, St. Louis or Pittsburg.

During my six years' stay, snow fell once, in December 1907. It stayed on the ground but a few hours, and has not fallen in the city again up to the present writing. The temperature never has gone below twenty-eight degrees above zero, *above* mind you, and freezing of water pipes is unknown. During September is the hottest weather and at no time during a weather record covering forty years has the temperature gone above eighty-five degrees. The general temperature is about sixty-three degrees, with a daily variation of about ten degrees.

Fog may be expected. The bay to the north widens to about four miles square, and holds the fog which rolls in from the ocean. Eureka is pretty well surrounded with water and it lies directly upon the Pacific and in a moisture laden atmosphere. The fogs are not so thick as they used to be when the redwood forest covered

the greater part of the townsite, for the redwood also holds the fog; yet the most rabid lover of fog will get his fill in Eureka and sometimes it is very thick. Generally the fog lifts about ten in the morning and the beautiful dazzling sunshine is all the brighter on account of the contrast.

Heretofore, the worse weather conditions of which the people could boast, the better they seemed to enjoy telling the tale. I have heard statements about the sun not shining for six weeks and one winter I set myself to keep a little sunshine record. Every day the sun shone until I got tired of the experiment, but I must admit that on many days there was only a short glimmer for a few seconds, which no one except an amateur weather man in his enthusiasm as a booster would call sunshine. Then too, my work called me all over the city and on the foggiest days I sometimes went out toward Harris Street and Sequoia Park.

The rains are to be expected in November although an occasional shower comes at any time during August and September. The first rains are usually light and there is a spell of the most beautiful weather with sunny days between the first and second rains. During January, nature gets down to business and it rains steadily nearly every day during February and a portion of March. The rains frequently come at night and the day will be beautiful and sunny. From April to the next October, you may safely plan your picnic, for rains are past. There are really only two seasons in Humboldt, the dry and the wet. It is eastern spring, all of the time, and one wears the same weight of clothing the year around.

The roses bloom throughout the year. The grass grows during the "winter" months, and clothes the hills and meadows with green. I, at one time, conceived the idea of transplanting palm trees, and began to notice the number of these plants scattered throughout the city. After I had counted four hundred and sixty I gave up. If any one had told me there were over a hundred palms in all Eureka, I would not have believed him. Nearly every species adapted to California is represented. The fan palm, the date palm and the dracaena are the most common.

The evergreen varieties of trees are to be found in the residence yards. Their rugged outlines, and majestic sturdiness, their full leafed needled branches, their commanding height, outlined against the blue sky, appeal to the senses of beauty, symmetry and line.

CHAPTER III

DISCOVERIES PREVIOUS TO PERMANENT SETTLEMENT



THE first point to be discovered by Europeans in Humboldt County was Cape Mendocino, named after Don Antonio de Mendoza, the Spanish Viceroy of Mexico, or as it was then called New Spain. Humboldt County had been discovered many times before, first by the original Indians, then by Eskimos, many times by the Chinese and also by the Japanese. It is hard to realize how old this earth is, and that man has lived on it unquestionably two hundred thousand, and more likely millions of years. When we look at the skull recovered from the La Brea field near Los Angeles, and when we reflect that this specimen lived in North America two hundred thousand years ago, we can realize that most history consists only of written records, and the honor of being the first discoverer of a "new" country rests on forethought in writing down his discoveries and general good fortune in having his manuscript preserved for several hundreds of years.

The origin of the first inhabitants is lost in the maze of antiquity. The meagre traditions of the Indians only speak of their ancestors as springing from the ground like trees and of having lived here forever. The races near the coast are much darker and show a strong strain of Chinese blood. For thousands of years Chinese junks have been blown onto our shores—a most recent instance of this happened only six years ago when seven Chinamen landed in Humboldt County after having crossed the Pacific in an open boat. This has been going on for ages, and the many who have reached this coast, may be the forefathers of our Indians in Humboldt County. Habits of life, climate and food produce changes in races, and the variations between the North Coast Indians and the Mongolians are very slight, so much so, that if the Indian girls

dress their hair in Japanese style and wear the kimono, and the Japanese girls adopt the Indian style and dress, they pass for what they appear to be—of the other race.

To the Spanish belongs the honor of the first recorded discovery of Humboldt County. Preserved in the public library of Madrid, Spain, among the old manuscripts, was the log of Juan Rodriguez Cabrillo. After the conquest of Mexico and acquirement of fabulous riches, Cortez equipped several expeditions to discover and explore the land to the north and perhaps find richer lands to conquer. After Cortez died, the efforts were kept up. In 1542, Mendoza, Viceroy of New Spain, fitted out an exploring and conquering expedition of two ships, which were named "La Vittoria" and "San Salvador" under command of Cabrillo, which sailed on June 27, 1542. Cabrillo died on January 3, 1543, and was buried on one of the Santa Barbara Islands, and the command fell on Bartolome Ferrelo, the chief pilot, a native of the Levant. Ferrelo carried out the instructions, which were not to give up the discovery, as far as possible, of all that coast, and soon set sail northward. On February 28, 1543, he discovered a very prominent point, which in honor of Viceroy Mendoza, he called Cape Mendocino. A dense fog prevented him from seeing Trinidad Point, but he passed by it and went as far north as Cape Blanco in Oregon. Here he turned southward and returned to Navidad in Mexico. The log, which is called "Viaje y descubrimientos hasta el grado 43 de Latitud" and is kept in the Archivio General de Indias of Spain. As the name of Juan Paez is the name found on the log it is possible that he is the author of the account.

No record exists as to whether Sir Francis Drake entered Trinidad Bay on his cruise during 1579, although he is reported to have made a thorough search of the coast of Oregon and northern California.

On May 5, 1602, Sebastian Viscaino started on his second California voyage. His account is recorded in the Appendix to the French Edition of Miguel Venega's "Historie de la California" Paris 1767 and in Navarrete's work. Proceeding up the coast slowly, it was not until January 12, 1603, that Viscaino arrived off Cape Mendocino. There the storms seemed to have become extremely fierce and he was driven northward to Cape Blanco before

the weather cleared. He then turned south and examined the coast, finding and marking on his map the headland now known as Trinidad. The real honor of discovering Humboldt County properly belongs, however, to a man one hundred and fifty years later than these first navigators. Juan Bodega discovered and named Trinidad on the 9th of June, 1775. He found a good anchorage, protected by a lofty headland from the prevailing northwest wind. Two days later they landed and took formal possession of the country with all the prescribed ceremonial, including the unfurling of the Spanish flag, a military salute, raising the cross and a mass.

On account of June 11th, 1775, falling on Trinity Sunday, the port was named Trinidad, and the stream nearby, known since as Little River, was named Principle. The natives were numerous and friendly, and by no means timid. They were ready to embrace the padres, they did not hesitate to put their hands in the dishes, and they were curious to know if the strangers were men like themselves, having noticed an apparent indifference on the part of the Spaniards to the charms of the native women.

Bodega and his companions remained at Trinidad for more than a week, during which some explorations were made, water and wood obtained, the habits of the natives were studied, and the peculiar double rise and fall of the tides observed and recorded. One of the sailors became enamored with one of the Indian women and he was lost by desertion. He was the first white settler, and he should be fittingly honored as the original Humboldt pioneer.

A new topmast was made for one of the three vessels. Finally, on the 19th of June, 1775, the navigators embarked and left the port of Trinidad with its pine and redwood clad hills, and hove away to the northward. No more landings were made on the California coast and the expedition finally returned to Mexico.

In April, 1793, Vancouver followed the coast of California northward from San Francisco, but he never saw Humboldt Bay. His course was about ten miles out from the Coast north of Cape Mendocino. On the 2nd day of May, 1793, he made the California coast near the promontory of Cape Mendocino and sailed past the headland towards Trinidad Head. His account reads: "The land was in sight but was so covered by a haze that its parts could not

be distinctly discovered." He reached Trinidad Nook, as he calls it, that evening, and anchored in eight fathoms of water. His ship was called the "Discovery" and it was at anchor here for three days until the 5th of May, 1793. Here Vancouver found the cross set up by the Bodega expedition in 1775 with the inscription in Spanish as follows: "Charles II, by grace of God, King of Spain."

The next visitors were the Russians. By this time Trinidad had been marked on all the maps as a good shelter port, and hence nearly every ship of the Russian American Fur Company was there at some time.

In December 1803, the ship *Boston* with Captain O'Kain in command, was at Trinidad; during March 1806, the *June*, under direction of Nicolas Petrovich Resanof, the Russian Chancellor, who was sent to investigate the affairs of the fur company, anchored there. There are traces in the Russian records to give authority to the report that Resanof, who was accompanied by the naturalist, Langsdorf, tried to enter Humboldt Bay but failed.

The honor of being the first to discover Humboldt Bay belongs to an American sea captain by the name of Jonathan Winship. He, however, occupies the same position with relation to the discovery of Humboldt Bay, that the Norsemen hold with regard to the discovery of North America. His acts and deeds left no permanent result upon the development of the county. Hidden away in the archives of the Russian Government in Petrograd was the record of his discovery in 1806 of the "Bay of the Indians."

Captain Jonathan Winship was a native of Boston, Mass., and followed the sea practically all his life. In 1804 he sailed from Boston in command of the ship "Ocean" with supplies for the Russian American Fur Company of Sitka, Alaska, or New Archangel, as it was then called.

The yearly supplies came by vessels around Cape Horn; and after a tedious and stormy voyage, Winship arrived at Sitka on May 6, 1806. Governor Baranof entered into a contract with this American captain and American crew to hunt sea otter and other fur bearing animals along the California coast. He also furnished more than one hundred Aleutians and fifty-two boats to accompany

the expedition. Former voyages of the Russians during 1803, 4 and 5, had thoroughly explored the coast of California. Trinidad Head and Cape Mendocino were well known. However, on account of the breakers which form a continuous line between these two points, and on account of the bluffs which mask the entrance, no actual discovery of Humboldt Bay had been made.

The "Ocean" immediately sailed after the making of the contract, and arrived at the port of Trinidad during July of that year.

When the Aleuts spread out over the country in search of otter, the bay was seen and reported to Winship. He set sail and eighteen miles to the south he discovered the entrance to what he called the "Bay of the Indians." Sounding at the entrance which he called Resanof, he found a depth on the bar of fifteen feet, which was enough to float his ship. He crossed the bar and came up the channel, which was about the same as at the present time. He anchored the "Ocean" at the south end of Gunther Island, half way between the island and the Samoa peninsula. The Aleuts in their kyacks explored the bay and neighboring rivers. Four Indian villages were discovered, one located near the present station of Manila on the north peninsula, the second close to Brainard's Point half-way between Arcata and Eureka, a third a short distance south of Bucksport and the last on the end of the south spit. The Indians did not welcome the newcomers. These were destroying the sea otters which abounded in the bay; they were disturbing the geese and ducks and were annoying the clam diggers. Several conflicts occurred, and the Indians refused to do any trading with the Russian company.

Captain Winship took observations of the positions of the bay and his are very close to the correct figures:

Russian—Latitude $40^{\circ} 59'$, Longitude— $124^{\circ} 08'$.

Correct—Latitude $40^{\circ} 45'$, Longitude— $124^{\circ} 14'$.

He also made a map of the surrounding country which is remarkably correct when we reflect that they had no surveying instruments. The soundings up the bay show almost the direction of the present channel. Three islands, Gunther, Woodley and Daby are shown. There is a small stream which enters the northeast part

of the bay and it may be intended for Jacoby Creek. The South Bay is shown and the relative positions of both parts of the bay and the shore of Buhne's Point to the entrance is plain. The sand hills of the peninsula and the bluffs bordering the eastern side of the bay are indicated as usual on maps, together with the presence of thick groves of trees and marshy ground.

After leaving the "Bay of the Indians," the vessel sailed to the Island of Cerros off the coast of Lower California. Here on account of some misunderstandings between Winship and S'Lobodshikof, who had charge of the Aleuts and bidarkas, the expedition separated. A small schooner named the "Nicolai," was bought from some Americans for 150 otter skins and S'Lobodshikof and the Aleuts sailed for the Sandwich Islands. Winship and the "Ocean" started on the return voyage and arrived at Sitka in the month of September, 1807. His whole catch consisted of 4,820 sea otter of all grades, which he disposed of to good advantage.

In 1809, Captain Winship made another voyage to Humboldt during which he secured 2,782 sea otter skins. By 1812 the decrease of the sea otter catch made the business unprofitable and Winship returned to Boston. His log book and maps were sent to St. Petersburg, now Petrograd, and from them were compiled the atlas and account of the first recorded discovery of Humboldt Bay.

Various other Russian ships came between 1806 and the extinction of the sea otter in 1812 and the consequent disruption of the fur business. In 1823 a company of nineteen men under the command of Jedidiah Smith traveled up the coast, stopping at Trinidad for one day. Smith River in Del Norte County was named after the leader of this party.

In 1831, William S. Ray, working for the Hudson Bay Fur Company stopped at the head, with a view of establishing stations, but he was not impressed with the situation and went on to San Francisco.

CHAPTER IV

DISCOVERIES LEADING TO PERMANENT SETTLEMENT



IN the evening of December 20, 1849, an American from New York state by the name of David A. Buck, discovered Humboldt Bay from the land. When California came into the possession of the United States as a result of the Mexican War, the discovery of gold stimulated the settlement of the country. The gold diggings of the central valleys being soon taken, the miners spread to other parts of the state. Mines were opened on the headwaters of the Trinity River which was so named as it was supposed that it flowed into the ocean at Trinidad Bay. There was great difficulty in obtaining supplies from the Sacramento Valley, and an easier route was desired. The presence of a large bay to the west had been reported by the Indians.

On the 5th day of November, 1849, a party of miners consisting of Dr. Josiah Gregg, Thomas Seabring, David A. Buck, J. B. Truesdell, L. K. Wood, Mr. Wilson and a Mr. Van Duzen started from Rich Bar near Weaverville, to find some way of communication with the ocean. On account of the general northwest direction of the coast range of mountains, which is nearly parallel with the ocean, the party was forced to ascend and descend mountains almost continuously. About the 12th of November, they discovered the south fork of Trinity River, and descended this to junction with main Trinity River. Here they crossed and met for the first time a band of Indians, whom they intimidated by firing their guns at a mark to prove the white man's power. It was the intention to follow the river down to its mouth, but on the assertion of the Indians that the numerous tribes of the lower river would oppose them, they decided to move directly west.

During the next few days game was scarce, and they were several times in danger of starvation while crossing the rugged mountains.

In addition the timber began to be thick and made progress slow. As the country became less rough the forests became denser. The growth of the redwoods, many twenty feet in diameter, was so luxuriant, the undergrowth so dense, the fallen trees so numerous, that they could travel only two miles per day. In many places they had to cut their way through. Finally the sound of surf was heard. Mr. Wilson and Mr. Van Duzen went on ahead to make sure. It took three days to get the horses through the remaining redwood forest.

They reached the sea at the mouth of a small stream now known as Little River. The date was about the 16th of December, 1849. The party then went northward, stopped two days at Trinidad, went on north until they came to Big Lagoon, then turned back southward. They crossed Little River, continued on down the coast to Mad River, which received its name from a quarrel among the members of the party while crossing.

On December 20, 1849, they encamped on the west slope of the sand hills of the north peninsula. While searching for water, David A. Buck saw the waters of Humboldt Bay, although it was so dark that he could not tell its extent. The next day the whole party moved over to the shore of the bay, to which they gave the name of Trinity.

They were visited by numbers of the Indians, who informed them that the bay was connected with the ocean, and that they would have to march around the north shore. Mr. Buck went down to the entrance to satisfy himself. On the next night they encamped where Arcata is now located. They had Christmas dinner at Arcata, roasting an elk's head. It was determined to proceed south to San Francisco. About December 30, 1849, they discovered Eel River, giving the name on account of the party living on eels for several days. At the mouth of Van Duzen River, as they could not agree on the route to San Francisco, the party divided; one part reached the Sacramento Valley, the other the Sonoma Valley.

In March, 1850, several vessels not knowing the discovery of the bay from the land in 1849 by the Buck party, left San Francisco to search for the mouth of Trinity River and for bays between

Cape Mendocino and Cape Blanco in Oregon. On March 26, 1850, Captain Ottinger of the schooner "Laura Virginia," discovered from the mast head the mouth of the Eel River, and also the waters but not the entrance to Humboldt Bay. The channel ran out well to the northwest directly against the ocean swell and the wind. The breakers on the south shoal overlapped those on the north shore, thus presenting a continuous line of breakers against the coast, so it was believed that no available boat entrance existed there. The vessel continued her cruise along the shore to the northward. They found Mad River and Little River, they anchored in Trinidad Bay for some time, and then examined the Klamath River, and after further search as far as Point St. George, near what is now Crescent City, they returned to Trinidad Bay. A party was landed whose duty it was to explore on foot the coast south towards the lagoon or bay which had been seen from the deck of the ship on March 26th. Three or four hours' travel brought them to the mouth of Mad River, and after some parleying the Indians on the opposite bank of the stream carried them across in canoes. Late in the afternoon of the same day, April 3rd, the party saw the entrance, and reached the channel at the end of the north peninsula. They encamped for the night at the point where the old Humboldt lighthouse stands, and the next day returned to Trinidad. Some days afterwards the schooner anchored off the south breakers abreast the southern point.

On April 9, 1850, Hans H. Buhne, then second officer, accompanied by Wm. Broderson, James Baker, Mr. Palmer, and one other man whose name has been forgotten, in a boat from the schooner tried a passage through the south breakers. The boat was nearly swamped several times. When almost through, the Indians on the south spit made signals to steer northward, but she finally reached the swash channel under the south point. Through the swash channel they entered the main channel and passed into the bay. Buhne then ascended Red Bluff or Buhne's Point and saw clearly the direction of the channel between the two lines of the breakers and a smooth bar outside. The schooner went to the northward for four or five days, and on her return Buhne went out to her, sounding in nearly four fathoms of water on the bar.

The tide and wind being favorable on April 14, 1850, second officer Buhne took the wheel and guided the "Laura Virginia" into the harbor to an anchorage off Buhne's Point. It was this party that gave the present name of Humboldt Bay, naming it after Baron Von Humboldt, the famous explorer. The few days' delay of the schooner in crossing the bar robbed them of the honor of making the first settlement in Humboldt County.

Other vessels were cruising in this locality, and from the sea on March 16, 1850 a party of the ship "Cameo," was sent in a boat to examine what is now Trinidad Head. The "Cameo" on account of the stormy weather was forced to desert this crew and sail to Point St. George. The men thus abandoned, rounded the head and found Trinidad Harbor. They explored the bay and near the head of it found the record left by Dr. Gregg, carved on a tree, dated December 7, 1849 with the latitude and temperature. The men marched northward along the beach, nearly starved during the next eight days, and were picked up by the "Laura Virginia," which they guided into Trinidad Harbor.

Captain R. V. Warner arrived at Trinidad April 10, 1850, on the brig "Isabel" and immediately laid out a town naming it Warnersville. Several houses were put up and at an election held three days after the settlement, 140 votes were polled. The town grew rapidly, became the base for expeditions going to the mines in Trinity County, and its name was changed to Trinidad.

The Laura Virginia party established on April 14, 1850, a town on or just north of what is known as Buhne's Point, which they named Humboldt City. The boat was under the control of the Laura Virginia Association, which was organized with two Boards of Trustees, one to reside in San Francisco, and one to go with the ship. Subsequently little attention was paid to the San Francisco Trustees. The purpose of the Association, when any important discoveries were made, was to select and take possession of such lands and locations which should be deemed best for commercial and agricultural purposes. Each locator was to hold his claim for the joint benefit of all members until an allotment should be made defining the rights and shares of each in town lots and outside lands. The Board of Trustees on board ship was composed of

E. H. Howard, W. H. Havens, and R. T. Lamont. The commander of the ship was Lieutenant Douglas Ottinger of the U. S. Revenue Service, but on a leave of absence. The vessel carried provisions for two months' voyage and had fifty passengers aboard, bound of course for the gold diggings. A stock of merchandise and lumber was carried.

Lands were located on the shores of the bay opposite the entrance covering the water front for a distance of four miles and extending back indefinitely. A town sprang up under the activities of the pioneers. Improvements were started, trails were opened to the Trinity mines, surveys were made, lots were sold, a postoffice and postal service applied for. Humboldt City gave indications of reaching the rank of a prosperous and populous town. Stores, pack trains, mechanics' shops, and saloons gave unmistakable signs of progress. But the advantage of a nearer route to the mines and an Indian trail from the head of Humboldt Bay already in existence, gave the advantage to Union, now Arcata; and Humboldt City faded from the map.

"Arcata"

Arcata was founded on April 21, 1850, by L. K. Wood and a party of thirty men. After that part of the original expedition who had made the first discovery by land in 1849, had reached Sonoma, and L. K. Wood, had recovered from his journey, he organized a band of thirty men to come overland to Humboldt Bay. They arrived April 19, 1850, and saw the Laura Virginia and Humboldt City. Purposely avoiding the latter, they shifted their course more to the north and came out on the shore of the bay at the point where Bucksport now stands. Here they left four men to occupy and make improvements on the land, and the rest of the party made their way to the head of the bay to the spot which they considered as the only place for a town. This was where the original party had encamped on the 25th day of December 1849, and roasted an elk's head for a Christmas feast. On the 21st of April 1850, Wood and his friends laid out the town of Union, posted notices, started the foundations of houses, then returned to Bucksport. At this time several vessels had arrived with many miners for the

Trinity gold fields and Union became a prosperous town. Humboldt County was formed by an act of legislature approved May 12, 1853, and Union became the county seat. A contest arose and several petitions circulated.

Eureka, Union and Bucksport each claimed to be the seat of government. Several dishonest elections were held and the legislature settled the matter by removing the county seat to Eureka, in an act which took effect May 1, 1856.

In March, 1860 the name of Union was changed to Arcata and such it has remained. It is supposed to mean in the Indian tongue "*Place over yonder*" and is probably the most pleasing name of any place in the county.

"Eureka"

Eureka was founded on May 9, 1850, by James T. Ryan and twenty-four persons. A list of the original locators is of interest, for they are pioneers of the city. W. D. M. Howard, Mr. Greyson, Albert Guild, Joel Lightner, Sam Brannan, Jas. T. Ryan, Henry Weatherbee, James R. Duff, George H. Tilley, James Johnson, Augustus D. Northrup, Wm. H. Dunham, Jacob Phaff, George S. Young, Abram W. Stratton, Edward Williams, John W. D. F. Davis, Andrew B. Brown, Mr. Wardell, Mr. Scammon, Isaac Lindsey, George Spence, Wm. Westgate, W. L. Blanchard, Hugh McGrath, A. Eisewald, and John T. Young. Some of these are the ancestors of citizens of Eureka in 1916, the Howard Brannan, Ryan, Duff, Scammon, McGrath and Young families being the best known.

They came on the schooner "Eclipse" which had formerly been a pilot boat at Baltimore, Maryland. It was a small ship of only seventy tons burden and was commanded by Captain Charles Tomson. As soon as the discovery of Humboldt Bay became known, they put in and anchored opposite Bucksport on May 6, 1850. Everyone was laying out townsites, and during the next few days they prospected for a suitable location. On the 8th day, the month of May, the party in charge of James T. Ryan returned to the vessel and reported in favor of the spot now occupied by Eureka. It was probably chosen because a small patch of ground, extending from

F Street to B Street and from the water front to 3rd Street, was clear from trees and was sort of a prairie. The timber was thick east of F Street and came down to the very water's edge, and the marsh began just west of B Street. It was the only break in the timber belt on the southern side of the upper Humboldt Bay. All other clear land was marsh and slough. A small creek emptied into the bay at the foot of F Street, giving a convenient water supply.

On the morning of the 9th of May, 1850, the schooner got under way and sailed up the bay. They came to anchor at a point between F and E Streets very close to 1st Street and inside the present line of wharves. Before evening all the goods were landed, tents pitched and the little flat presented the appearance of a town. During the next day the survey of a townsite was started; the lines cut through and the blocks staked at the corners.

At first the prosperity of the town depended on the traffic with the mines, but the closeness of the trees to the water's edge and the ease with which the timber could be handled, invited the people to engage in the lumber business. A sawmill called the Papoose was erected close under the bank between J and K Streets. It commenced sawing lumber in November, 1850. The building of the Eureka Mill between D and E Streets and the Picayune Mill at the foot of K Street during 1852, and three others in 1853 determined that Eureka should be a permanent settlement and the principal town of this county.



HOOPA'S VALE

Paradise on earth seems near, nowhere does nature do more for man than here by Trinity's winding Stream.

CHAPTER V

THE ANCIENT INHABITANTS



SCATTERED all over Humboldt County are to be found deposits which were left by the aborigines during ages, consisting of charcoal and ashes of their campfires, the refuse of their cooking which consists principally of clam shells and other mollusks, and their household belongings made principally from stone. Every spot along the banks of Klamath, Redwood Creek, Eel River and the Mattole which was a flat and moderately free from timber, shows the evidence of former occupation. On every beach along the coast, where sea food was plentiful; at every clam bed in Humboldt Bay, the ancient town-sites, some large, some small, can be traced.

By far the finest and most interesting deposits are the two shell mounds on Gunther Island in the middle of Humboldt Bay. One of these is on the extreme eastern end of the island, the second is in the center just opposite and facing Eureka at about the foot of I Street.

They are literally graveyards. The Indians buried their dead a few feet from or right beside their houses, the better as they explained, to watch and guard the bodies of the dead and to have the strength and help of their spirits. The Humboldt Indians had a profound respect for the dead, the best evidence of this veneration is that it was a terrible thing to mention the name of a deceased person. With the dead, they buried the implements of shell, bone and stone which the party had used or highly prized during his lifetime. The Indians lived mostly upon the fruits of hunting and fishing. Clams, around the bay section, formed the principal articles of diet. Of course the shells could not be eaten and the Indians had the habit, when they were done, of tossing the shells over their heads and that saved dish-washing.

In addition to being the permanent habitation of a few people, Gunther Island was visited by all the surrounding Indians at their various feasts and dances during the year. Most of the bay islands are subject to overflow at high tides and these two high places have been entirely built up from the discarded clam shells. They boiled and baked clams and feasted when the tide was out, until the clam shells rose above tide water. Then they built permanent habitations. There are places on both mounts where the clam shells are twenty-two feet deep, and Indian bones and relics can be found all the way down. The area covered by each mound is approximately ten acres.

Think of the hundreds of years necessary to pile up that mound and of the thousands of people who ate the millions of clams. It took hundreds of generations of Indians to accomplish this result. A calculation of the cubic contents of one mound divided by the amount of clams consumed in one day by fifty Indians, gives a result which runs over forty thousand years.

When we reflect that the aborigines in numbers only used the island at their festivals and that two such mounds have been built up, we can say that it may have been a hundred thousand years ago or more when the first man encamped on the mud flat in the middle of Humboldt Bay, just exposed at low tide, built his little fire and ate his clams, which he had dug near-by. History does not consist entirely of the human written record, nature has her narrative written in the deposits. Humboldt has probably been occupied by man much earlier than the clam deposits of Gunther Island would indicate.

At Ettersburg, in Mattole Valley, southwestern Humboldt County, while digging a well, an aboriginal campfire and relics were encountered twenty-five feet below the surface. This means that the river had to cover the flat on which these ancient inhabitants of Humboldt lived, with silt and river mud to the depth of twenty-five feet. In calculating the deposits of the Nile River, the accumulations averaged four inches during each hundred years. In twenty-five feet there are 300 inches, dividing by four we get seventy-five. In Ettersburg then, that camp may have been started seventy-five centuries ago which is 5500 B. C.

The "kitchen middens" have been thoroughly investigated and the results are published by the University of California. In the cultivation of the land, nearly every plowing turns up the relics of stone hammers, elk horn wedges, mortars, pestles, ceremonial stones and implements of stone. The well dug through the mound on which Mr. Gunther lives, passed through twenty-two feet of shells, with Indians' bones and relics all the way. The deeper down the purer get the clam shells. On the floor of the deposit, lying on the bay mud, covered by this twenty-two foot deposit of clam shells, were decaying spruce trees four or five feet in diameter. A tooth of a mastodon, which can be seen in the public library was found under the roots of a willow tree. In digging a trench fifteen feet long, six skeletons were encountered.

We find their mills and hammers for grinding the acorns and seeds, together with their spears and arrow heads. As the mounds contain no metal, nothing but stone and shell implements, we know that these people belonged to the Stone Age and had no communication with the white people prior to 1800 and did not know the use of metals.

Vegetation sprang up at an early date and decaying, mixed with the clam shells and the sand they brought from the peninsula and used in their cooking, together with charcoal remains of their fires, forms the rich black soil covering Gunther Island.

I have located many townsites around the shore of the bay. At the visit of the white fur trappers in 1806 they found four permanent villages, at Manila, Brainard's Point, Bucksport and on the north end of the south peninsula at the entrance of the harbor. The deposits at these points would indicate a long occupation.

At Shelter Cove in southwest corner of Humboldt County, eighty miles from Eureka on the coast, there are hundreds of deposits, many of them high upon the encircling hills, some two or three miles from the ocean. They had to pack their food up the steep grades and it is evident from the number and size of the deposits, that a population of hundreds of aborigines lived here at the same time. In fact, Shelter Cove is a native paradise, abounding in abalones, crayfish, clams, fish and marine food of all kinds.

These vast deposits of shell show how important was the presence of the sea, and in the deposits are found bones of whales, seals, dolphins, sea lions and the skeletons of various kinds of fish. On Eel River there were numerous tribes and their chief food was salmon and eels. This river was full of eels. When the first white men reached Eel River, they met an old Indian who was carrying a basket of eels on his shoulder, and who dropped his basket and ran away in his fright. At the juncture of the Van Duzen and Eel, the party encamped for a few days and one of them had a package of needles. A basket of eels in exchange for one needle was the basis of trade with natives, and it is no wonder the explorers named the River Eel. The skeleton of this fish does not last long, and the deposits along Eel River are not very extensive and besides no real and thorough investigation of Humboldt County deposits has been made.

Along the Klamath River there were three tribes, the Yurok, Karok and Hupa. They were more vigorous than the other Indians and had over fifty towns along the course of the stream. Their food consisted of salmon obtained in great numbers from the river, of acorns and seeds. They were very clever in boat building and the making of baskets. These materials leave little evidence of past ages, and the mounds have not been thoroughly examined because the living Indian is occupying the old grounds.

There were twenty separate and distinct tribes of Indians in Humboldt County speaking a different dialect, when the country was settled in 1850. They however, belong to the same Athabascan stock and speak related languages. In 1860 an Indian War was precipitated by the massacre of the Indians while celebrating one of their annual dances on Gunther Island. It was Saturday night February 25, 1860, that over 200 Indians throughout the county were killed by a surprise attack which was the result of a carefully planned plot. The Indians were stupefied and tired out by their week long dance.

After the massacre, the Indians began killing every unprotected rancher, and they ceased to trust the whites. There had been a desultory war during 1858 and 1859 between the mountain Indians and the settlers and a great deal of injustice had been done on

both sides which is natural in any war. But with each new injury, the feeling of hate and revenge grew greater.

Generally the trouble was started by acts of violence on the part of unprincipled white men, who would go to an Indian rancheria, demand all guns and meeting with any resistance would shoot and kill. If the Indians gave up their arms, these scoundrels would take away the squaws. The law abiding citizens of Humboldt County attempted to punish the men and in some cases imprisoned them. But the laws of the white men and the Indians are different. Under the Indian law, a fine must be paid to the relative of the murdered man, then the crime would be condoned. If the fine is not paid, the relatives of the criminal are responsible and are liable to be killed. The Indians looked upon all whites as related, hence when they came to avenge any act, they killed the first white man they met.

A company of soldiers was located at Fort Humboldt near Bucksport and they did very little until after the massacre and when the real Indian war began. The Indians around the bay were gathered by the government in 1860 and were taken to Smith River in Del Norte County. The Indians at Eagle Prairie where Rio Dell now stands and those living on the tongue of land between the Van Duzen and Eel River were taken to Hoopa Reservation as were also those living on Mad River and Redwood Creek.

A great many of the first settlers married the Indian women, for which they cannot be blamed, for the young Indian women often have almost white complexions with regular features, and are quite vivacious. The Indian population has grown smaller in number, decimated by war and sickness of all kinds. New and unaccustomed diseases were brought in by the whites. Confined to reservations they did not number over twelve hundred in 1921.

Fortunately an extended study of their languages, geography, history, folk and religious customs, implements and life has been made by Pliny E. Goddard, and others under the direction of the University of California. Phonographic records of their folk songs have been made and their myths preserved both in the original

tongue and translated into English. The use of their various implements and the meaning of the designs on their basketry has been explained before the knowledge has been lost through the extinction of the race. In this Humboldt County is indeed fortunate.

CHAPTER VI

THE REDWOODS



THE ocean currents, topography and prevailing winds form a triumvirate which rules the destinies of any land. On the California coast we have the warm Japan current flowing a few miles offshore. Inland we have the Sacramento Valley. Between and stretched along the coast are the mountains. Vapor is continually rising from the warm waters of the Japan current, while in the Sacramento Valley the warm air ascends, creating a draft from the ocean of the prevailing northwesterly trade winds. The warm vapor from the ocean is drawn over a stretch of colder water, known as the Davidson Inshore Eddy, lying just offshore and flowing north along the Humboldt coast, and is condensed into fog which hangs low over the sea.

The coast line from Cape Mendocino to Trinidad and even further north to the Klamath River is low and gradually slopes back to the summit of the mountains dividing the ocean from the Sacramento Valley. The topography between Eel River north to Mad River is almost flat. The draft caused by the warm air ascending in the valley draws the cool fog-laden air inland and as the slopes are gentle, the wind boosts the fog over the ranges and up the valleys of the coastal rivers.

Summing up we find the air cooled and moist, the skies faded and pale, creating ideal conditions for the development of the wonderful redwood forests of Humboldt County, which are, and some day will be recognized by all people, as one of the natural wonders of the world. This mighty continuous forest of these great trees is longer than the distance from Boston to New York or from Chicago to St. Louis. It takes days to travel merely from end to end of that forest. The belt of redwood averages from eighteen to twenty miles wide.

The Redwood or Sequoia reaches its greatest perfection in Humboldt. There are individual trees that grow to twenty-six feet in diameter and tower 350 feet in the sky. To realize what these figures mean, think of a house two stories high and look at the people more than a city block away, and you will gain an idea of how these giants look when they are felled to the ground by the woodman's ax. There are two types of the trees—that which grows on the hillsides, and the second which grows on the flats along the rivers and streams. The usual type is that of the slope, and is found on the steep sides of the coast ranges, and side by side grow other trees such as red fir, tan bark oak, white fir, and madrone. As the slopes become moderate, the altitude lower, the soil deeper, the forest becomes denser, the second type of redwood is developed on the rich flats; and in the gulches no other trees grow. On the slopes, 225 feet is about the maximum length, and ten feet its greatest diameter, while on the flats, under better conditions, the tree grows to be 350 feet high with a diameter of twenty feet, and occasional giants exceed this.

Most of the redwoods are from 400 to 800 years old. The oldest tree scientifically measured was 1,400 years. After the tree passes 500 years it usually begins to die down from the top. It has a straight, slightly tapered trunk, without limbs for more than 100 feet, and a crown of horizontal branches that may occupy a third to a half of its length. The roots strike downward at a sharp angle and are so large and so numerous that they form a compact mass. The bark is of a reddish gray color, fibrous in texture, gives to the full grown tree a fluted appearance, and offers a remarkable resistance to fire. The bark is often two feet and more thick and, except under great heat, it is not combustible. Insects do it little harm, the wind can scarcely uproot it and fungi seldom affect it.

The redwood requires little from the soil except that it be moist. This is supplied by the rains, of which thirty to sixty inches fall during the autumn and winter. During the summer, sea fog bathes the coast. It is so dependent on moisture in the air, that this factor mainly or wholly determines distribution and the eastern limits of the forests are defined by the distance inland to which the sea fogs may drift. Hence the range of the redwood in California

is in a belt about ten to twenty miles wide and parallel with the coasts. Along the Eel River is found the best redwood. This is due to an additional supply of fog which drifts into Eel River valley from Bear River. The trough between Cape Mendocino Ridge and Bear River ridge, is open to the sea and forms a gateway for the drift to the upper part of Eel River.

A drive through the forest makes man a pigmy. Their proportions are perfect and gradually as you look and see the comparison of size with the objects around you, the sequoia swell and swell, until in the midst of such grandeur, such sublimity of nature, how insignificant one feels himself to be. Immense gray trunks in the gray fog, stand like sentinels of the ages, who have sprung up from unknown depths and are patiently waiting the time when their immense growth shall lift them into another world. They dream, their thoughts are too full of other weightier things to enter fully into our little affairs. Starting from a base lost in a bed of ferns, we follow with our eyes the great furrows plowed in the red green stained bark to the sturdy limbs with their feathery leaves. The branches start directly, but at the ends sweep downward as though embracing the trunks. Here is size, dignity and stillness. How absolutely and how all pervading, almost supernatural in their profound silence. These trees do not sway in the wind, they are constructed to stand solid. Their fine turned needles may catch the breeze, but you and I are too far below to distinguish the whisperings. The sequoia stands in the hush of an absolute calm.

There is the commercial as well as the esthetic side to the redwood forest. Here is a crop ready for the harvest which has been growing for five centuries and is matured.

It seems a sacrilege to cut down these majestic trees, but the majority of them are past their prime of life and are deteriorating. Indeed, you have to have lived in the redwood realm for a year and have driven through it several times, before you begin to notice the enormous amount of fallen timber—dying, broken and shattered trees. Along the county roads a good deal of the down timber has been turned into shingle bolts, puncheons or shakes; or the roadway has been cut through the fallen giant. But step off the road and attempt to climb the nearby hill and a wonderful discovery is

made by the lover of nature only. The way is blocked by prostrate trees, sometimes piled three upon the other, and an enormous amount of the timber has been shattered in the fall. As the redwood grows old, the base becomes hollowed and this extends often clear to the first limbs and many a time a noble specimen from the outside is naught but an empty hulk within. After one becomes accustomed to the forest, the snags are as numerous as the good trees, and it is only because we are lost in wonder and admiration in the contemplation of these mighty works of nature, that we do not notice the ugly and the worthless at first. But the forests are unsurpassed and unsurpassable by any like them in the world, and far above the other generousities of nature to Humboldt County, stands her overflowing growth of timber.

Gigantic in bulk, and majestic in height, they are so closely planted together that even the sunshine is shut out. There are more merchantable timber products to the acre in a redwood forest than any other commercial wood.

The commonly accepted estimate of 100,000 feet per acre for all the compact redwood forest in Humboldt is held to none too great, and there are groves where some acres will cruise one million feet of merchantable lumber. When one remembers that clear redwood boards sell for \$32 per thousand feet and merchantable grades bring \$20 in the market, it will do well to reflect that the average acre produces over two thousand (\$2,000) dollars, of manufactured products and there are exceptional acres which run as high as twenty thousand (\$20,000) dollars. The results are staggering. One tree was run through the plant of the Pacific Lumber Company at Scotia as a test and the net profit on that one tree was eight hundred thirty (\$830) dollars, after paying all expenses, stumpage cost, logging, transportation to mill, sawing and stacking in the yards. Not content with a record of \$830 from a single tree, another exceptional tree brought a profit of twelve hundred and ten (\$1210) dollars. An acre of five trees of this size would bring a profit of over six thousand (\$6,000) dollars. The highest price received as yet for redwood timber on the stump was when five hundred and fifty (\$550) dollars per acre was paid for about eighty acres on Sonoma flat just above Dyerville.

The expense of logging is very great. In the beginning of the industry in Humboldt County, redwood timber was hardly considered fit for lumber purposes. This was partly because its many excellent qualities were not known or appreciated, but more for the reason that the primitive logging appliances of that time were unable to cope with the huge bulk and immense weight of logs cut from the redwood giants. And even after the virtues of redwood lumber were known and understood, and it was the exclusive output of the mills of Humboldt, it was customary to leave one, two and even more of the butt logs in the woods because they were too unwieldy to be handled by the comparative puny appliances of that period.

But now logging machinery has been improved until the Humboldt logger of today makes no more ado over bringing from the woods an eight, ten, or twelve foot butt redwood log, weighing from ten to twenty tons than does his fellow craftsmen of the northern and eastern states at handling the slender poles that are dignified by the name of "saw logs."

The peculiar qualities of redwood timber that especially fit it for most building purposes are many, its defects few. Among the most pronounced of its virtues may be enumerated its weather resistance; freedom from warping; shrinkage or swelling; straight even grain and smooth sawing qualities; lack of combustibility due to an entire absence of pitch and the presence of an acid which seems to be a deadly foe to fire. The large size of trees which, with its great percentage of clear timber, enable flawless planks and boards to be produced of almost any desired width. It has softness and ease with which it may be worked into almost every form known to the trade; together with the uniformity of texture and quality. The logging operations are interesting to the visitor and will furnish one of the attractions to the future tourists. Usually the choppers work in pairs, one of them accustomed to chopping from the left hand side. The tree is examined with reference to the lay of the adjacent ground so that when the tree falls, there will be no shattering of the gigantic bole. After determining the location of the fall, a bed is prepared to receive the tree; by chopping down smaller specimens along the line of the fall, leaving them so

that they will check the momentum and gently give under the weight and lower the tree to its resting place with as little jar as possible. A triangular notch is then begun and after two days' work it is about four feet deep, three feet high and the pile of chips on the ground would appeal to the heart of the old eastern lady, for the kindling problem would be settled for the winter.

A large twelve foot cross-cut saw is next employed, the men starting on the side opposite from the notch. After working a day or more, the gigantic bole gives a shudder, its heart has been reached. Groans and threats begin, and the men rush to safety spots. The tree tilts slowly, gathers momentum, crashes down upon the bed prepared for it and the roar of Niagara resounds through the forest. Many accidents to the workmen occur when the tree falls. It sometimes kicks back, sometimes falls in a different direction from that intended, sometimes the limbs larger than a man's body are hurled through the air, so the choppers are very particular in picking out a spot to follow the motto of "Safety First." After the tree is down, it is cut into lengths of eight, ten, twelve feet or even larger dimensions according as the mill requires, or as the tree will cut. The bark is peeled off by the swampers, armed with crowbars, and a man size job is this, to peel the heavy bark often two feet thick. An enormous amount of trash, bark, limbs, undergrowth and smaller trees encumbers the ground after a given area is logged, as all the trees are felled at once.

This debris, which has dried out during these operations, must be disposed of before the logs can be taken out and the only method which has proved practical and not costing too much is to set it afire. With a sweep and a rush and a roar, the flames mount high and in a few hours the fire is out and only the logs lie on the burnt over ground. The fire resisting qualities of the redwood are hereby demonstrated, and no other timber can stand this test which is a daily occurrence in the Humboldt woods. The standing timber is not harmed, for the fire dies out when it reaches the uncut forest, because of the thick bark of the trees and the general dampness of any redwood land.

Small vertical boiler steam engines called "donkey," after the animal they displaced, pull the logs from all over the logged area

by means of cables into a string or train ready for a journey down a skid road to the landing. In olden days a team of oxen, but now the bull donkey engine, pulls the train of ten logs down the hills. The skid roads are usually made by laying ten foot lengths of two foot in diameter trees like ties, imbedding them in the ground. Crude oil is splashed on the skids to make the friction less, but the bull donkey yanks the logs down by main strength until a groove is worn in the skids, and a road is established. These bull donkey engines are large and have enormous power, their cables will often be five miles long. The cable is wound around an enormous drum as it is pulled in, while a smaller return cable is played out, so that the larger cable may return to the logging areas.

At the landing a spur of railroad runs up and small cars designed to hold a single log are ready. It is marvelous to see how skilfully the men can load these enormous logs, weighing ten tons, by means of cables attached to the donkey engines. After twenty cars are loaded, a railroad engine pulls the train down to the logging pond miles away, where the logs are unceremoniously dumped off the cars and fall with a mighty splash into the water. At the end of the pond is the mill, and as they are needed the logs are pushed towards an incline, up which they are pulled into the mill.

Large arms rise up from the floor and shove the log on a carriage where two men drive in iron dogs and fasten the log securely to the carriage. In less time than it takes to read this description the work is done, the carriage shoots forward and the sharp teeth of a huge forty foot continuous band saw bites into the marrow of the log. A board drops off, back shoots the carriage, the head sawyer lifts up two fingers, a lever is moved forward twice, the carriage shoots forward once again. A whining protest goes up from the log, and a two-inch plank is ready for the commercial world.

Not ready in a certain sense for it goes through many subsequent handlings. The board as it comes off the log is five feet wide. It must be sawed lengthwise in convenient and needed widths, the ends are trimmed, it shoots down an incline, slides out onto the wharf, is encircled with a chain lifted by the cranes and engines to the ship and stowed away in the hold to be taken to the market. If not sold immediately it is stacked and put among

other boards in immense lumber piles. The expense of these operations is enormous and it takes large amounts of capital to engage in the business, and the profit is many times small. Redwood finds many uses besides that of lumber; as shingles, shakes, lath, wood pipe, doors, sash, patterns, tanks, mouldings, frames, cornices, columns, turnings, panels, and toothpicks. Some trees are cross-grained and the stumps when sawed into panels show beautiful wavy grain and are called curly redwood. A large knot on the outside of many trees produces the famous burl which is full of bird-eyes and is worked up into trays, bowls, cups and other novelties.

And these forests are untouched. Only about one-tenth of the redwood area has been logged, the enormous wealth placed by nature on the hills and ranges of Humboldt, is more than would be produced by a century of agriculture on the finest of level farming land.

CHAPTER VII

GEOLOGY



THE northeastern portion of Humboldt County is by far the oldest geologically and appeared above the waters of the ocean probably ten million years ago. The land has been exposed to erosive forces, such as wind, rain, frost, and gravitation so long that a layer of land at least four miles thick has been washed away. The old rocks of the earth, containing minerals are at or near the surface. In fact as far back as three million years ago, the land has been reduced to a plain elevated just above sea level. In other words, the mountains had been washed down and the valleys filled up during the ages which elapsed since land now known as Humboldt County rose above the ocean.

For the purpose of a geological history it is hardly worth while to go further back than the 3,000,000 year date. The ocean shore was approximately along the line now occupied by Redwood Creek, and hence the whole of Humboldt County west and southwest of Redwood Creek was covered by the sea and received the deposits as they were washed off the land to the northeast.

At the end of the former period of seven million years, this plain was almost down to sea level. The remnants of this old plain in Humboldt County are found along the divide, nearly 3,600 feet high, between Redwood Creek and the south fork of Trinity River. The elevation called Horse Mountain and South Fork Mountain, the Salmon Mountain and Trinity Summits, which form the northeast boundary of the country and rise to an elevation of 6,000 feet, are nevertheless a part of this old plain.

A series of faults, which are tilting and breaking of the earth's crust, now occurred. The sediments along the shore were displaced

and tilted and raised a little above sea level. The new shore extended ten to thirty miles further west than before. The new land thus formed embraces a great deal of the hill country of Humboldt County, now at two thousand feet elevation. The more familiar portions are as follows:

- (a) The divide between Mad River and Redwood Creek. This is flat topped on Bald Mountain, near Acorn at 3,000 feet elevation.
- (b) The Kneeland and Iaqua Prairies.
- (c) On Bear River ridge, there are several flat tracts belonging to this old plain at elevations between 2,000 and 2,500 feet.
- (d) Mount Pierce, or the Monument, which is flat topped and rises to 3,278 feet.
- (e) Rainbow Ridge, 3,400 feet.
- (f) The ridge on which Fruitland stands and the overland road runs at an elevation of 3,500 feet.

Any one looking at the surface of Humboldt County from the lowlands would at first glance, say it was a mountainous country; but if one ascends to the heights it will be clearly seen that the surface of Humboldt is really a plateau which has been cut up by innumerable streams and owes its rough appearance to the erosive action of water. The tops of the ridges are almost always upland three to five miles broad. If not entirely level, nevertheless they slant in the direction of an uplift, and any one can see that the land was once level but now tilted. If you examine a picture of the hill country of Humboldt, you will notice that the sky line is a ridge which is nearly horizontal, and is nothing but the top of an old plain, whose edges have been cut into by the erosion of some river and its branches.

It may be said generally of all Humboldt County, that the land has been tilted at an angle of about twenty-five degrees. It has been subjected to four upward movements, three downward movements with five stationary periods in between. The total change in elevation at the old coast line of 3,000,000 years ago has amounted to 2,500 feet, but further east the upward movement



BIG LAGOON AND PATRICK'S POINT

Ultramarine Pacific, with its white winged procession of breakers, bathing the golden sandspit, behind which nestles the turquoise blue and sapphire green lagoon, between purple forested ridges, and over all the radiant sunshine glinting through the clouds.

was several times greater and reached as high as 8,000 feet in the Salmon Mountains.

Some folding of the strata occurred, but the effects of crushing were felt more at the edges of the plains. The land when tilted was also faulted and compressed.

During the five stationary periods, the streams would have a chance to carve out wide valleys. From the finding of the remnants of these ancient rivers, their valleys and plains, in different parts of Humboldt, and the number of changes in elevation, the length of time during the stationary periods is calculated. For, if an old valley is wide, it must have taken a long period for a river to smooth down the country and cut into the mountains on each side until it had cut a flood plain, say three miles across. Of course in soft material a wide valley would be cut, and some of the ancient valleys are ten miles wide.

A great many of the old flood plains were once at sea level and are now a thousand feet above the present river. They owe their preservation to the fact that by some accident the river was turned onto the older and harder rocks, so that the stream was forced to cut deeper into the hard rocks and could not wind from side to side. A fine example of this is Mad River. Just above the town of Blue Lake, the North Fork enters Mad River and the low valley of Mad River begins and is shut in by bluffs of tilted beds of sand, rich in fossils of clam and sea shells. Ascending to the summits of these surrounding hills, one finds them to have flat tops which are almost 800 feet above sea level and which form the bottom of an ancient valley of Mad River two or three miles wide. Mad River now occupies a narrow canyon and runs through hard rocks far below.

A summary of the uplifting and subsiding and standing still of the surfaces of Humboldt may be of interest and they are numbered to correspond to the fifteen various changes during the last 2,000,000 years.

- 1st. A long stationary period of 600,000 years.
- 2nd. A faulting and tilting to just about sea level of the sediment deposits along the coast.

3rd. A stationary period of 250,000 years. These first three have already been discussed.

The fourth change was an uplift of 500 feet of the whole coast of northern California and Oregon during a time covering 20,000 years.

5th. A stationary period of 100,000 years.

6th. An uplift of 500 feet during a period of 30,000 years.

7th. A stationary period of 50,000 years.

The remnants of the plains formed during No. 5 and No. 7 are not found as plateaus occupying the tops of ridges, but as terraces on the sides of the ridges 500 and 1,000 feet below the tops.

These terraces are merely the broad valleys formed by the rivers during that time which dates considerably over a million years ago. All the higher terraces bordering the narrow canyon like valleys in which the present streams flow belong to these stages. A fine example can be seen by an observer on both sides of Eel River, near Alton, where the flat plateaus (formed remember, 1,000,000 years ago) are now 300 to 500 feet above the present level of the river. Or the terraces may be seen on Mad River, near Blue Lake; or extending inland along the Klamath River, in the bluffs along the ocean south of Klamath River, and the heights along Big and Stone Lagoons.

8th. A small subsidence of about 200 feet during 2,000 years was followed,

9th. By a stationary period of about 5,000 years. During such a short time the streams could not cut broad valleys and this stage is revealed by small terraces 200 feet above the terraces of No. 5 and No. 7.

10th. An enormous uplift of 1,500 feet that next occurred threw the line of greatest erosion far out beyond the present sea coast.

What is now Humboldt County was far inland and contained only the upper courses of the rivers. The land extended two

hundred miles further out in the ocean and stood 600 feet higher than it does at the present time. The edge of the continent adjoined the deep sea. The whole Pacific Coast was affected by this uplift which occurred during Pliocene times and took nearly 250,000 years to accomplish. It was during this time (eight hundred thousand years ago) that much of the older strata was tilted and crumpled and the rivers in some cases were wholly diverted from the old channels and cut new ones.

The newer channels were cut down through the soft materials of former deposits and are now from 800 to 1,500 feet below the former courses of the streams. At the Hoopa Reservation the ancient bed of the Klamath lies 2,850 feet above Hoopa Valley. In the eastern part of Humboldt, the elevation that took place at this time reached 4,000 feet. At Prairie Creek the old Klamath River bed lies 700 feet above the sea level. The gravel deposits of the ancient stream have been traced at various elevations from Hoopa to the coast. The early valley of Redwood Creek is found when crossing the divide to Bairs at an elevation of 2,550 feet or nearly 2,000 feet above the present stream. On the road which crosses Eel River at Alder Point, the earlier valley of Eel River is found a thousand feet above the present level. These instances could be multiplied a thousand times, but these are given to show the method by which an elevation or uplift of the land is detected.

- 11th. This was a stationary period of about 70,000 years, during which the forces of erosion were strong and the revived rivers swept much of the former deposits away. The coastal plain developed under this period lies now beneath the ocean and hence cannot be seen and has been covered by later deposits along the coast.

The next two, No. 12 and No. 14 subsidences one 700 feet, the second of 1,500 feet carried the ocean shore line back almost to Redwood Creek, where it was 2,000,000 years before. The depression of 700 feet during 30,000 years submerged the continental border and carried the land below its present level.

- 13th. A short stationary period of about 2,000 years was followed 14th by a tremendous depression (1500 feet) of the whole coast. This submergence had a profound effect on the land drainage, as many of the narrow valleys were filled and the deposits of the present coastal plains around Humboldt Bay were laid down during this period which covered two hundred thousand years.
- 15th. Without a stationary period, before the sea could advance far inland, the return swing began. The land has been rising during the last 150,000 years.

During this period we are now living to A. D. 1923, the uplift has reached about 1,200 feet. It has taken place in three stages, giving the ocean a chance to carve terraces and form sea beaches. They are best seen between 900 to 1,000 feet above sea level along the ocean front at Point Gorda, Cape Ridge and Bear River Ridge. They are however, heavily weathered.

The best example of a coastal plain extends from Little River, near Trinidad, south to Eel River and about Humboldt Bay. Here is most of the arable lowland, and in some places is densely forested. Their tillage and lumbering furnishing occupation for the greater number of the people of Humboldt County.

The first terrace is elevated from 10 to 200 feet above the sea. An example of this is the plateau on which Eureka is located, or Dow's Prairie on the road towards Trinidad. The next terrace is marked at 300 to 500 feet, represented by Table Bluff, but found all along the bay shores. The third terrace is at 1,000 feet elevation and is most general along the Humboldt coast, showing, that a long halt in the uplifting occurred at that level. Since then the uplift has been gradual and approximately uniform.

Throughout this uplift the streams had been gaining power and have been eroding the land and have dissected the old plateau until the country is well cut up. A handy example of what can be done by the erosive power of water is found in the Wildcat section back of Ferndale. Viewed from above this country is a mass of ridges intersected by deep canyons with innumerable side branches and lateral canyons. At one time this Wildcat was a plateau continuous

with the elevated benches found back of Grizzly Bluff and on both sides of Eel River at Alton, especially the plateau on which Hydesville stands. This plateau marks the ancient flood plain built up from the sediment of old Eel River previous to the last great depression.

The deposits making the Wildcat being further out to sea than those at Alton, were more finely divided and were composed of silt. When they were elevated 800 feet the soft pliable earth would crumble speedily under erosion, and the present cut up appearance is due to the softness of the strata, and also to the fact that the period since elevation has not been long enough to wash away the whole deposit.

Eel River has survived all the vicissitudes of changes in level and in fact expanded its size by the capture of important streams. A fine example of stream capture is furnished at the Low Gap of Mad River. A glance at Humboldt County map will show that the Little Van Duzen having its source at Lasseck's Peak was the original main stream. A tributary ran into it from the east, which eroding back at its source cut across an important former tributary to Mad River, thus annexing a considerable watershed to Eel River.

Naturally during the changes in elevation the rock was broken into fragments by the pressure and faulting. If it is remembered that the country drained by Eel River was made up from sediments only partly consolidated, the slides that take the place constantly are easily explained. The country is being reduced to the level of a plain again. A striking feature of Humboldt soil is its depth and fertility, even on the tops of these mountains and ridges. When we reflect that they are only elevated plains and even then sediment soil and old river valleys, it is no wonder that the soil is deep and rich.

The Klamath River has had the most and hardest work to do. It originates in the lakes of Oregon and it completely crosses all of the mountains to reach the Pacific. It has had to saw its way across the ridges. The uplift in the Klamath section reached 8,000 feet and it has had to cut its canyons through that depth of strata in order to hold to its ancient course. It lies approximately

in the same position that it did millions of years ago, and is still grinding away at the ledges of rocks, the roots of the old mountains which one can see at every rapid.

Humboldt Bay is of extremely recent origin. The sand peninsulas are undoubtedly formed by the action of the ocean currents which run northeast along the coast, and have deposited their load of sand along the line of their flow. The prevailing west wind has blown this sand towards the bay and widened the peninsulas as time went on. The entrance to the harbor is due probably to the amount of rain water which drains into the bay through Salmon Creek, Elk River, Freshwater Slough, Jacoby Creek and other streams. This water piling up during the winter months broke through the retaining sand; and, once opened, the ebb and flow of the tide would keep open an entrance such as we now have.

The enormous forest covering indicates a lapse of thousands of years; however, only a second of Time. The distribution of the redwood forest shows that the trees we see now are but the great grandchildren many times removed from the original seeds scattered by the winds.

The surface indications are but a small section of the great book of history to be gleaned from the rocks and deposits which lie all around waiting to be read and have their story told.

CHAPTER VIII

OTHER TREES IN HUMBOLDT



RANGING throughout the redwood forest are other conifers—fir, cedar, spruce and yew. The most common tree is the Oregon pine or more properly douglas fir. It is midway between the true spruces and firs and its quality runs to great variation owing much to location. East of the redwood belt it is the principal tree and covers the hills and is rapidly encroaching on the grazing lands. The white fir also sometimes forms solid forests. Spruce trees grow along the coast. They used to cover the dairy lands on lower Eel River, and one variety thrives on the tide lands. It is not a widely distributed or common tree.

Cedar, a beautiful symmetrical conifer, is found in the Wildcat and at Shelter Cove, but more so in the Klamath River section, where a species of white cedar much resembling redwood is found. Cedar groves occur along the coast. One at Dow's Prairie, west of the road, is very fine and beautiful.

The sugar pine, the noblest of its family, is found in northeastern Humboldt wherever the elevation is high enough. It attains great size, up to eight feet in diameter and two hundred feet tall on the Trinity Summits and South Fork Mountain. A small grove is found isolated on Kings Peak, evidently a remnant of a wide spread forest which existed when the elevation of the country was higher than it is now. The seeds of the sugar pine were and are now highly prized by the Indians who gathered them in the old days by climbing the tree and knocking down the great cones. Now they chop down the tree. Several varieties of the true pine, white pine, knot cone pine, and bull pine are found in the extreme eastern part of the county.

The yew, a slow growing conifer, resembling somewhat a small redwood is found in deep shady canyons, but never attains a large

size, being from twenty to forty feet high and much branched. The wood is very fine, susceptible of a high polish and is very tough. On account of its elasticity it was sought after by the Indians, from which they constructed their bows.

The oaks are widely distributed and represented by many varieties. The tan oak in the woods is a tall, clean limbed tree running to a height of a hundred feet and rarely over two feet in diameter. Its lumber makes fine flooring and inside finish. It is good for furniture where stiffness yet not great strength is required and where it is out of the weather. In the open country the tan oak is low and wide spreading. The acorns are nutritious but contain a large amount of tannic acid, which impairs their fattening qualities.

The oak of second importance is the "live oak" or some times called "drooping live oak" and Valparaiso Oak. In its best developed specimens this is a beautiful tree indeed, with rugged outline and mighty strength. The live oak in Humboldt is quite a different species from the broad leafed live oak about San Francisco Bay and southward. The biggest oak on the campus of the University of California at Berkeley wouldn't any more than make a good limb for quite a number of the Humboldt live oak. Rocky bluffs are their favorite place. Oftentimes you will find on seemingly poor, exposed, rocky points or bluffs, too poor to grow much of anything else, splendid specimens of live oak. Some of the finest trees are growing near the tops of the mountains. One individual on the Gillem Peak stands well to the front as one of California's largest oaks, being over thirty feet in circumference.

Live oak is put to no use at present. Its bark, though often quite heavy on large old trees, is of little value for tanning. The wood is tough, dense, fine grained, heavy, hard and stiff. As timber for manufacturing purposes it is the best of the Humboldt oaks. The young live oak always has a prickly leaf similar to the holly, but as the trees grow up out of harm's way, they gradually dispense with this protective measure, and the leaves become smooth.

Another species, the black oak is a large tree with a great deal of log. It is tall and generally leaning. Its bark has some value for tanning. Fence posts made of it are fairly good. We frequently

hear the remark, "Everyone dies when its time comes." This is rather too fatalistic a doctrine for some of us, but with the black oak is is very acceptable. It would seem that when the black oak is ready to fall, it falls regardless of weather conditions. It will get through a severe storm and let go all hold and drop to rise no more in a dead calm maybe a week or a month after. It is rare indeed that one falls in a storm, so the black oak falls when its time comes.

Another is the white oak. In appearance it is similar to the white oak of the eastern states, but the timber is inferior in strength and toughness. Its acorn is the most palatable of all our oaks and much sought for by all acorn eating animals.

The golden leafed chinquapin is an evergreen tree, whose bark in old trees closely resembles that of redwood. The seed is produced in a burr, like the chestnut. It is not a chestnut or an eastern chinquapin. It has a wood similar to the true chestnut, but fruits very sparingly on account of the acorn moth. The chinquapin makes a splendid ornamental tree, pyramidal in shape, close grained and very regular. Some fine specimens, four feet in diameter and eighty feet high are to be found in different places throughout Humboldt.

Another very widely distributed tree is the madrone, resembling the southern magnolia with its large glossy leaves. It forms considerable percentage of the stand in a mixed forest of Oregon Pine, tan, live and black oaks, and madrone, and grows to such a size as to make a good saw log. The average tree is from a foot and a half to three feet in diameter. It reaches its greatest perfection in the Mattole, and the finest madrone in the world is supposed to be the specimen which stands on the Wilder school ground at Ettersburg. It measures 24 feet 8 inches in circumferences and is about 70 feet high. The tree is branched about 10 feet from the ground, and is very shapely and spreading. It measures about 270 feet around the spread of the branches, and the school house sits beneath its shade. It is 11 feet in diameter through solid wood at a point 8 feet above the ground. The trunk is solid and uninjured by fire. It stands on the crest of a rounding knoll, away from all timber, with the exception of a young live oak and two young firs

on the northwest side. Madrone timber is close grained, tolerably dense but not hard. It has a reddish brown color, takes a good polish, is stiff but warps badly. The bark peels every season. No use is made of the Madrone except for fire wood. It produces a high grade of charcoal.

Cottonwood is found scattered along the streams in all parts of the country. Some of the specimens are of large size but the tree is nowhere abundant. No commercial use is made of its wood.

Willows are universal along the streams. They are used extensively in rip rap work, protecting the banks of the rivers, as they resist the cutting force of the water. In any flat which has been washed by a freshet, the next year will see a willow thicket covering the ground. In the course of several years the ground will be almost to its old level. Several years ago, Eel River washed away about forty acres of fine dairy land thirty feet above the river level just west of the railroad tracks at Fortuna. In fact, the depot and railroad had to be moved back at least one hundred feet to the east, as the right of way was taken. The succeeding year, the spot was a receiving ground for floating timber, and during the spring and summer, the willows were flourishing where had been sand and gravel bars. In the nine years since, the slack water produced in this willow thicket, has caused the deposition of so much river silt that the land is now within three feet of its original level.

There are several species, one of which grows away from the water on the hillsides. This upland willow often becomes a good sized tree.

The alder is found along every stream and follows every rivulet far up on the mountain side to its source. The "Oregon Alder" is found in numbers but the "rhombifolia alder" is the prevailing species. As compared with the first type the rhombifolia is more elegant in growth, has a glossier, smoother leaf; the wood is denser and finer grained, and the tree does not grow so large. The rhombifolia blossoms in December and January, the Oregon alder in March and April. The chief use is for firewood, into which it must be cut immediately after falling as the log rots very quickly, and in a year or two is worthless.

The Maple is represented by three species. The Oregon Maple is the most widely scattered. Like the alder, it is found along the streams in more or less abundance. Its beautiful leaves, in either summer or autumn, form a refreshing contrast with the pines and redwoods, and the trunks and branches are usually thickly hung with clusters and festoons of gray moss.

The pepperwood or "California Laurel" or "Bay Tree" is an evergreen tree with long leaves that, when disturbed or pressed in the hand, emit a spicy peppery odor. It is found throughout the entire length and breadth of Humboldt, from the rivers to the very tops of the mountains. It sometimes grows on the hillsides away from any spring, but its principal habitation is about a spring or along a creek or river. Whenever a grove is found, there is also a retreat of beauty and coolness, as the ground under these trees is always moist.

The pepperwood presents a knotty appearance, caused by the bulbs or warts that grow out near the base. The trunks are long and sometimes two or more feet in diameter. It produces a large crop of nuts, small and resembling a cherry in shape, so abundant at times that the branches fairly bend with the weight of their load. These nuts are very fattening, and the hogs devour them with relish, and the fat produced is quite firm. The nut is edible when roasted, and was much used by the Indians. The wood is a beautiful greenish yellow color, and sawed into lumber, is handsome with rich and diversified grain, which takes a fine polish. There is one saw mill in Humboldt which makes a specialty of this lumber, which is much used in interior finish and furniture making.

The dogwood (*cornus*) is quite often seen. In the spring it has large white flowers as big and similar in form to a single dahlia, and becomes a conspicuous sight in the woods. When growing in the shade, the dogwood has beautiful foliage of a characteristic green color. In autumn it takes on gorgeous colors, unrivaled in brilliancy only by the scarlet of the vine maple.

The *Rhododendron* assumes a tree form in Humboldt, often reaching forty feet in height, and usually found above 500 feet elevation on the hillsides. It grows among the most dense forests

in the twelve mile belt near the coast and its pink and scarlet blossoms blooming profusely on the trees, furnish a beautiful sight to the eyes as one journeys along the roads of Humboldt. Its cousin, the Azalea, is more shrub like in form and is found on lower levels in great thickets. In the spring, whole fields are covered with the yellow shading to pink blossoms, and the air is filled with its perfume.

The Buckeye grows in the southern and hill parts of the country, and in full bloom with its large clusters, looks like a huge bouquet. In the fall the ground under these trees is literally covered with buckeyes. The wood or bark is perfectly white and often a limb will grow several feet and then unite again with the trunk.

The Manzanita is found all over the country outside of the dense redwood forests, and forms the chief constituent of the chaparral which clothes so much of the mountain slopes in the eastern portion of Humboldt. Its trunk is seldom straight, generally of a twisted stunted shape, with dark brown skin that peels off every summer, leaving a fuzzy appearance. It attains its largest size in the mountains, where it is found as large as twelve inches in diameter. The wood is of red color, close grained, attains a high polish, but requires great care in seasoning, as it is very liable to crack. It makes the best fire wood on the coast, being even superior to hickory.

It has small hard leaves, the surest cure for oak poisoning. Toxin and antidote are side by side. The bane of the hunter, vacationist and pleasure seeker is the Poison Oak. It is the second great constituent of the chaparral and it is impossible to avoid it when walking over the hills while hunting the deer. Its terrible poison which is an oil that floats on the breeze, is known to everyone who visits the hills. The red colored leaves usually give warning of its presence, but some people are so susceptible to its poisoning effects that only to be near the shrub will cause infection.

The California lilac or myrtle is represented by several species with pretty flowers ranging from creamy white to deep blue, growing in thickets or cut over land. One species known as white thorn gives its name to a valley in southwestern Humboldt near Shelter Cove. In that region it literally takes the country. It

sprouts persistently from the stump after being burned by fire, and in a couple of years is as thick as ever. It forms impenetrable thickets, and has numerous wicked brads and grows from ten to twenty feet high. The fragrant blossom is a creamy white, very profuse and lends great beauty to the landscape in May. All the lilacs are great soil builders, making the ground dark and mellow and filled with nitrogen, their action being similar to clover.

The undergrowth in Humboldt forests is dense, being made up principally of great sword ferns with fronds sometimes seven but usually four feet long. Numerous varieties of ferns are found everywhere along the streams. The shrubs and berries are abundant. The filbert or hazelnut grows everywhere.

Humboldt is a natural berry country and will become famous for the color, size, aroma and flavor of its berries. Every cultivated form known to man will grow to perfection, but the wild berries have always favored Humboldt and are extraordinary in quality. Among the more common are the black raspberry, thimbleberry, pigeonberry, salmonberry and gooseberry. Black elders are occasionally found.

The black or purple huckleberry is most abundant, especially in the northern slopes, producing large crops in favorable seasons. The red huckleberry is of no importance, berries only occasionally being found.

Trees are bound to grow in Humboldt. The conditions are favorable and we should join with nature. For years the cut over timber lands were burned and seeded with grass and clover in an attempt to produce grazing land, but the most profitable use of the hill land will ever be in the raising of second growth timber. Lands cut fifty years ago around Humboldt Bay are now covered with valuable timber, often three feet in diameter. The redwood sprouts so readily from the stump that in a few years the hills are again clothed with green and are beautiful.

CHAPTER IX

AROUND HUMBOLDT BAY



DURING several excursions, I have walked completely around the shore of Humboldt Bay. It would be impossible to accomplish such a journey in one day as the circumference is considerably over eighty miles, and the account as here given, while appearing as one continuous narrative, is in fact the result of many trips.

Starting south from the depot at the corner of Second and A Streets, one follows the railroad. Just beyond the yards, several squatters have built cabins and arks over the water's edge. The blue waters of the bay intervene between us and the yellow sands of the peninsula to the west, and on our left is Eureka. The mud flats east of the railroad have been filled in with dredging materials excavated in deepening the channel along the water front, and the white shells cover the ground until Clark's slough is reached and the marsh land begins.

This marsh lies between the railroads and the bluffs and is about a thousand feet wide and extends down the entire eastern bay shore for a distance of ten miles. Most of the marsh has been reclaimed as the railroad grade makes a very good dyke, and the land has been put into clover and grasses and ranks as highly productive and valuable dairy land. To the west, between the railroad and the bay, is a strip of tide flats about 400 feet wide, which has been utilized by manufacturing plants on account of the combination of the water front and the railroad shipping facilities.

The first manufacturing plant is that of Eureka Mechanical Co., sash and door works and the Acme Foundry. Beyond these are the plants of the Bayside Lumber Co., the Humboldt Mineral Water Co., and the Western States Gas and Electric Co. Further on to the left, close to the bluff is the Humboldt Brewery. On the

bluff back of it is the site of old Fort Humboldt, marked by tall masts of the wireless station.

Three miles from Eureka is Bucksport, a small village, the location of the Standard Oil Company, the wharf and railroad terminus of the Elk River Lumber Company and Press's Shingle Mill. A mile beyond Bucksport is the mill of the Holmes Eureka Lumber Company.

Two miles on along the bay's shore we cross the bridge over the mouth of Elk River. Here the inroads of the waves have caused the railroad to build a protecting wall. To the east is Elk River Valley, about ten square miles in area, and a very fertile section devoted to dairying. On the curve of the bay shore beyond Elk River is the now abandoned site of Humboldt City, which was the first settlement on the bay.

As we want to ascend Buhne's Point to look out upon the land, we leave the railroad and cross the bottom lands and walk up the slopes of Buhne's Point. It becomes a bluff at the water's edge with an elevation of ninety-eight feet. The best idea of Humboldt Bay can be obtained from the view afforded from the top of Buhne's Point.

To the north is the expanse of the main bay, shut off from the ocean by the low sand dunes of the north peninsula. Directly in front is the bar and entrance marked by the long swelling breakers coming from two directions and confined by the long rocky arms of the jetties. Beyond and to the west and northwest is the broad expanse of the Pacific Ocean, lapping the shore with its combers and white foam. To the south lies the lower bay, which is really a big lagoon enclosed by sand spits. Beyond South Bay five miles away is Table Bluff. To the rear and east are the spurs of the coast ranges, covered with the redwood forest.

Descending from the bluff we pass the Buhne bungalow, sheltered from the winds and having a fine outlook over south bay. Crossing the ranch we are back on the railroad and soon reach Fields Landing, a small town of about 400 people. The wharves of the Pacific Lumber Company are located here and the manufactured lumber is sent for shipment to San Francisco and other ports, from the mills at Scotia, twenty-two miles away.

A number of sloughs and tidal flats of Salmon Creek prevent the following of the bay shore south of Fields Landing, so we walk along the railroad four miles until the station of Beatrice is reached, then take the county road west to the foot of Table Bluff grade. Leaving the main highway, a little used road skirts Table Bluff for three miles on the north side. It all depends upon the state of the weather whether the trip is enjoyable, if it is foggy or a cold north wind is blowing with over-cast skies, you may be chilled to the bone. The gray fogs and mists too often shut out the splendid views.

Usually it is a pleasure to walk along the highways of Humboldt, for the roads are bordered by a choice collection of native plants and shrubs. Wild blackberry sends its canes clambering over the fences. The salmonberry rewards one with an occasional yellow or red berry. The thimble berry, which is a variety of raspberry, is really good after one has acquired a taste for them. The azaleas bloom in the spring months, filling the air with their honeysuckle odor.

The vistas presented to the eye are beautiful. If it is lowland, the milch cows grazing in clover meadows, and the waving fields of grain form pleasing pictures of plenty. If it is mountains, the blue and purple of the redwood clad heights form contrasts to the blue sky or the fleecy masses of white fog which linger round the trees. If it is ocean, no more beautiful coast can anywhere be seen. In crescent form it stretches in yellow sandy beaches to the black rocks of Trinidad Head and the long hazy blue line of the mountains in the background are flung out to meet the ocean at Trinidad and Patrick's Point.

Where Table Bluff meets the ocean, a narrow sand spit four miles long begins and runs in northeast direction to the entrance of the bay. We follow this and find it much more advantageous to walk the beach which is moist from the waves and is firm to the step. The roaring breakers as they dash upon the strand, form a sight of which one never wearies. The passing of one wave in gentle ripples on the shore is marked by the creation of a new comber out at sea which rolls in upon the land.

On the end of the south spit, the work of rebuilding and enlarging the jetties is in full progress. The ocean currents have



THE REDWOODS

Immense gray trunks, shrouded in the fog; wrapped in mantle of silence and calm. Sublime product of the chemistry of Nature.
The sentinels of the ages.

filled in back of the south jetty so that the sand has formed new land nearly a mile wide. We walked out to the jetty as far as we were allowed and watched the work of bringing rock and dumping it into the sea to build up the jetties.

Walking back, the problem of getting across the entrance was solved by finding some Indians fishing on the wharf at the bay side, and a young Indian boy was hired to row us across in a boat to the north peninsula. It is quite a sensation to cross the entrance to Humboldt Bay, especially to anyone who has crossed the bar many times when coming in, but the water was as smooth as glass and the trip without event. At the north peninsula, the jetty work was carried on several years ago, and it is being repaired now. The two stark masts of the old *Corona* wreck at the entrance, remind one of the danger of this coast. The old abandoned Humboldt lighthouse stands solitary in the sands. On the east side of the peninsula is the United States Live Saving Station. Walking north two miles through a grassy country we reach the scrub pine timber near Rolph. The climate is certainly much better than in Eureka for the wind sweeps up the sand dunes to the west and gains such an elevation that the air usually seems calm and warm.

For years it has been the location of the ship building yards, the Rolph Shipbuilding Company has furnished the activity shown lately. To the north of Fairhaven is New Era Park, a favorite camping and picnic ground for the people of Eureka. It is a beautiful spot, amid low scrubby pines, with grassy glades and sandy beach. A half a mile walk will take one to the ocean's shore, where pleasant hours may be spent searching the shore for forms of marine life cast up by the tide.

The view of Eureka from the sand hills just behind New Era is very fine. It has an ideal location for a large commercial city. Beyond New Era, there is no road and the walk had to be made through drifting sands. The work of the wind in heaping up the sand in rolling waves makes a scene similar to the Sahara Desert.

Two miles north is Somoa, the town built up through the employment furnished by the mill of the Hammond Lumber Company. About 400 people comprise the population and great many workmen

daily come from Eureka by ferry boats to work in the great sash and door and lumber manufacturing plant. The logs are brought to the mill from the woods on Little River, twenty miles north over the railroad, whose tracks we follow as we go north from Somoa. Reaching the station of Manila, the railroad turns east crossing a large slough through which, in times of flood, the waters of Mad River enter Humboldt Bay. At Manila one of the largest rancherias of the Bay Indians was located.

Viewing Mad River bottom, we can see that it has been formed by the silt and deposits of the river. It has been utilized to make one of the richest dairy and agricultural portions in Humboldt. The large farm houses and barns, the fields green with clover or seeded to grain, the hundreds of dairy cattle, show how rich is this bottom land and how productive the soil. Three miles more and we arrive at the city of Arcata. It has a population of about 1200 people, and is located on a plateau at the northeast corner of Humboldt Bay, about two miles back from the deep water, between which tidal flats owned by the city intervene.

Arcata gives every promise of becoming a large city, and it might be possible for it to even surpass Eureka, provided capital and enterprise locate there. At the present time the citizens of Arcata seem to have a better realization of their duties and obligations, and numerous manufacturing plants, tanneries, a barrel factory, the railroad repair shops and others have been established in the little city. It has an enormous advantage of cheap land, which could be donated as factory sites, the water front is owned by the city, and the mud flats could be filled in while deepening the ship channel. Humboldt faces a new era, and new industries must be established if permanent prosperity is to result. People will not settle in a country until they feel sure that employment may be obtained. Up to this time dependency upon the lumber business has been almost exclusive.

The northern portion of the country is the least developed, and the mineral resources, especially copper, promise much for the future. Arcata is the natural center of this northern section, and the industries of Humboldt have not yet settled upon any one place, and the metropolis is not yet determined. A strong com-

mercial rivalry between the two cities is bound to result; but the interests of both communities are identical and the growth of both will result in the prosperity of Humboldt County.

The road between Arcata and Eureka is a finely improved state highway. The railroad follows the bay shore and crosses marshes and lowlands, so by far the most interesting walking trip is along the wagon road. Two miles south of Arcata, the little town of Bayside is reached, located in a valley made by Jacoby Creek. It is a farming community of about 200 people scattered along the road. A railroad from the logging woods further up Jacoby Creek, brings the logs and carries them out a long wharf, where they are dumped in the bay and towed to Bayside Lumber Company's mill in Eureka. About two miles south of Bayside a low country, sometimes called Dutch Flat, which lies back of Walker's Point is reached. The postoffice is called Indianola, perhaps a reminiscence of the old Indian village that used to be located on Walker's Point. Three miles south of Indianola is Freshwater Corners, where roads branch off leading to Kneeland Prairie. The country along the Arcata road is mostly farming land. The road now takes a westerly direction three miles along a bluff on the south side of Freshwater slough until Ryan's slough is crossed and quite a grade brings one up to the top of Ryan's slough hill. Houses now are on both sides of the road and really constitute a suburb of Eureka. A mile on, we reach the city limits where we take Myrtle Avenue street car to our home.

CHAPTER X

WHEN THE CHINESE LEFT EUREKA



HOW much better it is to say "Here is where the Chinese were" than to use the expression, "Here is Chinatown." For in Eureka such a spot has become ancient history. There are no Chinese in Humboldt. Moon-eyed celestials, who rejoiced in the names of Ah Woh, Ah Dye, Sing Hop and Bow Lung walked the streets of Eureka until 1885. Friction between the white and yellow races during a score of years; disorders, feuds and murders among the rival bands of Chinese, led up to the accidental shooting of councilman of the city of Eureka, which crystallized public sentiment into a determination "That the Chinese must go."

On February 7, 1885, two ship loads of Chinese, who comprised the majority of the Mongolian population of the county, departed for San Francisco, and this date marks the expulsion. The Chinese had settled in all parts of the country, in early days of gold mining on the Trinity and Klamath rivers. Thirty-five years after, the greater part lived in Eureka in the very heart of the city, but little removed from the main business streets. They had wash houses at the foot of F Street and scattered truck farms in the suburbs around 8th and K Streets, but Eureka's Chinatown was located on Fourth Street and the adjoining parts of E and F Streets. The most of the population, including twenty women, lived on the block bounded by Fifth, F, Fourth and E Streets. Here were the homes of over 200 Chinese. The ground on which the quarters were located, was low and swampy. A gulch which headed about Ninth and H Streets, ran through the block from the southeast to the northeast and debouched into the marsh near A Street. On account of the grading of Fourth and the streets to the north, the slough had been filled in at the lower end.

Hence Chinatown was without drainage. The houses costing from \$20 to \$50 each, were nothing but miserable shacks, built by the Chinese themselves, from rough refuse lumber. These were rented by the owner of the land for six to eight dollars per month.

In the rear of these houses a sort of a hollow square had been formed which became the receptacle of all the filth and nastiness that could accumulate. A stagnant pool of water had gathered in the center, and the refuse from the kitchens of seventeen houses and outhouses was dumped into this pond. Here green scum, formed from the decaying vegetables and filth, gave rise to an odor, seasoned by dried fish and opium smell, which was almost beyond endurance. The Chinese were personally clean, but they had not the faintest idea of sanitary conditions. Twenty-seven Chinamen were discovered by an investigating reporter, sleeping in one room, ten by ten feet in ground area.

Fronting Fourth on both sides were the merchandise stores, the rooming houses, opium dens and market shops. From almost every point of view, their presence was a detriment to the welfare of Eureka. It was a matter of astonishment and business loss for the white merchants to note the large amount of goods which came to the dealers of Chinatown by every steamer.

Their opium dens were a moral blight for as we read from the newspapers at the time, they were visited by white men and women and even boys. On a Sunday evening January 6, 1878, two white women were known to be in one of these places and were insensible from the effects of the drug.

During the first few years of their occupation of Eureka, they were peaceable enough, they were inoffensive and only resisted attacks from cowardly men and small boys. But about 1883, a different class began to come to the city, and two rival tongs were organized. Riots, murders and numerous assaults became the regular thing in Chinatown and they seemed to select Sunday morning as the proper time to do their shooting. They were armed with every conceivable weapon, but the revolver seems to have been the favorite.

On August 24, 1884; August 27th, September 23rd, October 26th and December 21, 1884, outbreaks occurred during which

bullets would fly across Fourth Street, and in some cases went through the houses of the white people living near by. After the riot of September 23rd, the citizens felt that the Chinese were becoming an intolerable nuisance and if some means could not be devised to make them behave, they should be made to leave. The courts were unable to check or punish them. On oath the Chinese would swear falsely, trials would be drawn out for months and then dismissed for want of evidence.

The denouement came fast. One Sunday morning, February 1, 1885, by far the most serious riot occurred in the China "Corner House" at Fourth and F Streets. Scores of shots were fired, two Chinese were killed, three wounded and eight arrested.

At five minutes past six in the evening of February 6th, two Chinamen met and passed by on the sidewalk on the north side of Fourth Street, below Rick's stable and where the Georgeson Building now stands. Some jeering and insulting remarks were made by one and both turned and began firing. Mr. David Kendall, one of Eureka's most prominent citizens, a member of the City Council, lived on the northeast corner of Fifth and E Streets. He had finished his dinner, and at this moment was coming down E Street, and was crossing Fourth. A bullet speeding diagonally across the street, struck him and he fell on his face. He was carried to his home, and after speaking a few words, expired. The murder of one of the white citizens by the Chinese crystallized public sentiment.

In less than five minutes the town was in a blaze of excitement. The supposed guilty Chinaman was arrested and nearly mobbed on the way to the lockup. Suggestions of burning the China Houses, and hanging all the inmates were in the air, but to the credit of the citizens of Eureka, no overt act was committed. A mass meeting was held at the Centennial Hall. A committee of fifteen was appointed, whose duty was to notify the Chinese to leave within twenty-four hours. The leaders of the factions were called before the committee and informed of the edict. The force of the suggestion and the delicate situation were appreciated, and within half an hour they began packing up their belongings. At daybreak, Fourth Street was filled with merchandise.

Two steamers, the *City of Chester* and the *Humboldt* were at the docks and on these the Chinese and their belongings were placed. Care was taken to put the different tongs on separate boats. Crowds of people watched the movement with close interest. Quiet and good order reigned and there was no disposition to molest the exiles. A scaffold had been erected on Fourth Street between E and F, and was extremely suggestive, but uncalled for, since the Chinese recognized that there was no good reason why they should not obey the dictate of the people of Eureka.

In fact, they seemed anxious for the sailing hour to come. On the *Humboldt* there were 135 expelled Chinamen and some 50 tons of freight. The *City of Chester* carried 175 Chinese and nearly 100 tons of merchandise. Four of the passengers were merchants who had resided from ten to fourteen years in Eureka. They left on Saturday, February 7, 1885, which may be said to mark the date of their expulsion, though the event belongs to the week than to a single day. It has resulted in good to Eureka, but chance favored the movement in several ways.

In the first place, the Chinese owned none of the real estate or houses in which they were living, or otherwise they would have been put back by the power of the United States Government. The government of China was impotent and weak and could not properly support the rights of her citizens in the United States. As universal agitation has been going on throughout California against the Chinese, and public sentiment was in favor of their total exclusion from America. Eureka was a small and isolated community, and it was an unusual circumstance, at the time, for two vessels to be in port, so that all could be sent away at once.

In the second place, the steamers arrived in San Francisco, on Sunday morning, when business was quiet and no one was expecting a boat, and few people were at the wharves. The telegraph wires were down, and the authorities in San Francisco had no knowledge of the eruption in *Humboldt*. Had the officers known they would have undoubtedly met the steamers and compelled them to return. The Chinamen, on land, scattered to the lanes and alleys of San Francisco's Chinatown, and it was impossible to collect them for reshipment. The Chinese Consul instituted a suit

for damages against Eureka, but after dragging along eight months, the case was dismissed.

All Chinese did not leave Humboldt at this time. Several wagon loads were brought in from the ranches and cook houses and sent away. In Arcata, they moved outside the corporate limits.

One by one on every steamer, the expelled returned to the country. Chinese peddlers began vending their wares throughout the city. Prominent leaders endeavored to establish a town outside Eureka, near enough to carry on business as they did before. On January 9, 1886, negotiations were made for the purchase of property on Second Street. This aroused the people, for once the Chinese gained possession of real estate, the law would have interfered to allow them to be unmolested. The sentiment of the whole country became bitter, and the Chinese element of Arcata started to leave on February 24th, and by April 24, 1886, they were all gone.

As the last one said "Me no likee go. White man, he say go. We go, you bet."

CHAPTER XI

“CAPTAIN U. S. GRANT”



CRITICAL period in the career of one of our nation's great heroes, came while sojourning in Humboldt. Several months of dreary isolated life, away from his family, fills with deep pathos the story of his stay in Humboldt. The humiliation which General Grant suffered during that period was not effaced for the rest of his life, for he said nothing of the time in his memoirs. It is hard to get at the facts when giving a history of those seven months.

During the fall of 1853, the war department promoted Lieutenant Ulysses S. Grant, to the grade of Captain and assigned him to Company F, Fourth United States Infantry, stationed at Humboldt Bay, in northern California. He arrived about the end of October, and left the country in April, 1854. During his stay there was a great deal of rainy weather which made him despondent. Fort Humboldt was a dreary place. He was unable to agree with his superior officer. His wife and children were in the east. His pay as an army officer on the Pacific Coast was too small to support his family. Grant concluded to resign, and in March 1854, applied for a leave of absence until the end of July following, and tendered his resignation dated April 11, 1854. On July 2nd, it was accepted, and his connection with the army ceased.

A great deal of tradition has naturally grown up concerning his stay in Humboldt, since he afterwards achieved so great fame, both as soldier and President. Most of the local stories are absolute fiction, as no man could possibly have done all attributed to him in the short space of seven months. People yearning to shine by reflected glory strove to connect themselves in a personal way with the stay of Grant in Humboldt. But any officer as unassuming, shy, sober-minded and domestic man as he, would attract little

attention during such a short stay, and would soon be forgotten when he departed.

It must be remembered that Grant in Humboldt during 1853 was not the same Grant who fought the battles of Shiloh and Vicksburg and triumphed at Appomattox. For during the ten years which elapsed he had been tried in the fires of failure in business and taught the lessons of disappointment, and having mastered himself became a master of men.

Grant, at the time he lived in this county, was a stout rugged young man, about five feet eight or nine inches tall. His nose was large and straight, his eyes firm and steady, and he wore a short rough hard sandy beard. His face was ruddy and he looked rougher than the common West Point graduate of the time. When he had duty at the Fort as officer of the day or while conducting the drills, he wore the regulation officer's uniform and performed his duty as a soldier should. When off duty he usually wore a suit consisting of canvas pants, canvas coat and an old straw hat. Socially he was sometimes a hail fellow well met, but he was a better listener than a talker, and generally he was a man of reserved habits and was not given to talking when there was no need.

Fort Humboldt had been established during the winter 1852 as a military post for the protection of the people of the country from the Indians. As Eureka was small in size and its location then wet and swampy, the fort was located back of the town of Bucksport, which seemed to give promise of becoming the largest town on the bay. Here was the scene of one of the early military services of a man who was later to become a famous general and a national hero.

Fort Humboldt Heights, as the location is called in 1923, is within the city limits of Eureka. The street cars now run past the spot enabling one to easily visit the historic place. The position of the post is a sightly one, on a plateau thirty or forty feet above the sandy beach of Humboldt Bay. It is naturally adapted for a fortification and gives plenty of ground for parade and drill. The barracks and the officers' quarters were erected in 1852, in the usual quadrangular form around three sides of the parade grounds,

leaving the west side open, and looking out towards the Pacific Ocean and the bay.

There were at least a dozen buildings comprising the fort. Three of them were large, two storied, and used as barracks. The other smaller buildings were one story with porches in front. Grant's headquarters were the second on the left or north side, and it was one of the smallest houses. The forest of redwood and fir in the rear made a background to the picture, and furnished abundance of timber. The buildings were built by the soldiers in the command. Their plan was to put up a frame, fill in with logs, then weatherboard and plaster inside. The first house was built in this manner, but it was found expensive and unnecessary in this climate. A good weatherboard house, plastered inside was sufficient protection against the coldest weather on the bay. Buildings of the latter type were easily worn out and blown down. Time and wind have almost demolished the buildings. The reconstruction of one used as a store house still stands, while boards and shingles of another lie upon the ground, a monument to the neglect of Eureka for one of its places of interest.

The commanding officer was Col. Robert C. Buchanan of the Fourth Infantry. He was a severe disciplinarian and strong in his prejudices. Grant did not get along very well with him, and there was a great deal of friction between them. Buchanan seems to have expressed no good will for the Captain, and did not at any time recognize the favorable record of Grant as an officer in the Mexican War. The ill feeling grew greater as time went on, and almost led to a court-martial, and is probably one of the reasons that induced Grant to resign from the Army service.

It is only fair to state that the salary of a captain was low at a time when the gold excitement was at its height, and price of food very great. The pay of the officer while perhaps good in the east, on the Pacific Coast was small in comparison with the wages of an ordinary laborer.

The life at Humboldt Barracks was monotonous in the extreme. The Indians gave no trouble; in fact, were very friendly, visiting the garrison and exchanging meat and berries for flour and hard tack. No military expeditions were undertaken while he was here.

There were practically no roads and when the soldiers did go out, they had to cut their own trails. The privates did not have much to do, an officer had less. The amusements, common in a lazy barrack life, in which other officers would freely indulge, did not appeal to Grant. Chained to inertia and cramping conditions, discouraged and in an isolated country, the longing for his wife and children was intensified.

Tradition in Humboldt states that when he was leaving the country to avoid further trouble with the commanding officer he said that they would hear from him afterwards. During the Civil War, Grant as superior officer met Buchanan as inferior, who was assigned to some rather hard work to do, in order to even up scores contracted at old Fort Humboldt.

Grant made many trips to Eureka. In those early days only mule trails led from the fort to the town, passing close to the marsh, which was then subject to tidal overflow, and along under the bluff to what is now South Park. From that place it became a partial road to the waterfront. Broadway and Summer Streets are the modern representatives of this old road. Eureka in 1854 experienced a depression in lumbering and other lines of business and the population was considerably diminished. In all Eureka there were not more than 400 people. The only streets were First, called Front, and Second, and these were but three or four blocks in length. The timber came down to the very edge of the water, but the trees near the shore were scraggly and wind blown. There were but two wharves and three sawmills. The spruce and fir were the only trees cut, as the redwood was too large to handle and its wood was not considered worth much. The people were engaged in lumbering and there were few women, hence no society to serve as counteracting attraction to the saloons. Of these there were three or four, the principal one being conducted by R. W. Brett, located on the bank of a little stream that flowed into the bay below the corner of First and F Streets. There was but one church and one general store.

Grant usually hung around the saloons and he is not to be blamed for this, because they were practically the only places to go. Here he would meet friends, sailors and new arrivals. There were billiard

tables, and he sometimes amused himself playing at that game. He cared nothing for the lower class of women. The saloons and a game of cards with boon companions were seemingly his only relaxations.

One evening Grant walked to Eureka, and at one place the road crossed a slough which used to run about where Fourth and E Streets now are. A large log served as a bridge. A drizzling rain was falling, and as the log was slippery, he fell into the slough. He came to Brett's place and stepping up to the bar, ordered a drink, went over to the stove and dried himself. He was accustomed to ride a mule to Eureka and one night he failed to return to the Fort and a party went in search of him. They found him asleep in a thicket about where the alley alongside Christ Church is now located. His favorite mule was browsing close at hand.

These incidents together with the fact that he frequented the saloons has given rise to many false stories concerning Grant's drinking. In order to have actually committed all the breaches of sobriety credited to him by the stories I have personally heard, he would have had to live in Humboldt four years and do nothing else.

He was a frequent guest at the homes of Dr. Johnathon Clark, James T. Ryan, Captain Maloney and the Duffs. He made Duff's place a secondary headquarters, where he often slept. He borrowed their big roan horse to ride. This animal would just as soon run away as not, and that suited Grant. He would ride out into the woods and jump the horse over logs and obstructions. The usual route he took was along a corduroy road, leading to a charcoal making camp. This was located about Seventh and G Streets, and the charcoal was for the use of the blacksmith shops. Twelve years later at City Point, just before the fall of Richmond, James T. Ryan called on Grant, who immediately recognized him, and asked after the sawmill and his family. He did not neglect speaking of the horse, Eclipse, saying "He was the finest horse I ever saw west of the Rocky Mountains."

When asked how he liked the clams which abound in Humboldt Bay, he pronounced them "A first rate substitute for gutta percha oysters!" The redwoods impressed him as "a species of red cedar of immense size."

On the hill back of Bucksport still stands a low one-story house formerly occupied by the Heustis family. Captain was a guest in this house and slept one night in the south room. The room is 12 feet long 10 feet wide and about 8 feet high. The window to the south faces the Elk River Valley. The windows on the west overlook the bay.

The close of his stay in Humboldt marks the parting of the way, and his resignation apparently severed him from the Army and he faced the problem of supporting himself. He was thirty-two years old, obscure, penniless and discouraged. It seems almost a miracle that seven years later opportunity should transfer his feet to the ladder of success, fame, honor and renown.

CHAPTER XII

EEL RIVER



THE principal stream of Humboldt County is Eel River, which drains three-sevenths of the surface. Its largest tributaries are the Van Duzen, which flows in near Alton from the east and the South Fork which joins the main stream at Dyerville. The area drained in the whole of Eel River basin is enormous, comprising a vast extent of the adjacent counties, Trinity and Mendocino.

During the summer months, the river is a placid stream carrying a good flow of water about 300 feet wide, meandering through a wide extent of sand and gravel bars. In the winter months, the river experiences disastrous freshets due to the heavy rainfall over its enormous watershed. On the higher ranges in the southeastern portions of the county, considerable snow falls. Then will come warm rains lasting three days, which add the melted snows to their own volume.

A flood from main Eel River is augmented at Dyerville by the South Fork and just as the river reaches the valley, an equal volume of flood is poured into Eel by the Van Duzen. The result is that the river not only fills its banks which are over a mile apart, but it spreads over the dairy lands near Ferndale and the islands in the delta, so that many times a sheet of water six miles wide and ten miles long can be seen. Three or more of such freshets may be expected each year and a great deal of speculation over means of preventing such floods in the lower valley has resulted.

The amount of sediment, gravel, rocks and boulders which Eel River carries at such times is enormous and as long as the stream is flowing through the mountains, the fall of the stream enables the river to carry its load. But at Scotia, where Eel River may be said to leave its canyon the fall is only three feet to the mile, with the

result that it has more gravel than it can dispose of. The river builds up its bed so high that it has to take to the sides, and thus it keeps ever worming about striking first one bank and then the other, gouging out a little more land each time.

The bottom land near the river is extremely valuable for dairy purposes and the constant temptation to utilize the ground during years of sub-normal rainfall, results in the farms encroaching upon land properly belonging to the river. All protection to be of permanent value must include not only riprapping to save the banks where the river is cutting, but also to leave a wide naturally curved course, planned to help the river the better to clear its channel and carry its gravel to the sea.

It is true, that with the best protective work, the valuable agricultural lands near the mouth might be overflowed in extraordinary floods. But such overflows occurring perhaps not oftener than once in ten years or twelve years, would really be beneficial to the land. None of the heavier matter brought down would reach these lands and the material, held in suspension and liable to be deposited there, would consist chiefly of mud or fine particles of earthy matter called silt, and instead of being injurious would serve to enrich the soil.

The whole of the Ferndale section is alluvial land and owes its richness and value to the fertility of the delta deposits. For ages the surface wash of decayed vegetable matter from the foothills and mountains has accumulated. The weather is too cold to successfully grow corn, though it is an ideal temperature for making butter since no ice is required, and some creameries have no artificial refrigeration. The maximum temperature of the season does not exceed 70 degrees and is rarely as high as that, while at night it ranges from 50 to 55 degrees.

From early spring to September, the dairymen rely upon their pastures almost exclusively, but as little or no rain falls from the middle of May until September, the pastures show considerable shrinkage in August, so that peas and other soiling crops are fed to supply the shortage. Carrots are extensively cultivated and make a wonderful growth, the tops standing two or three feet high, completely covering the ground. These are fed green, the



FORTUNA

On the banks of Lower Eel River, blest by Fortune.

tops and roots being alike consumed. Beets are also extensively grown for feeding purposes. Most of the pastures are in white clover. During the winter months, the almost continual rains soak the soil. During the dry season, they have a heavy fog and dew every twenty-four hours equal to a good sprinkling of rain.

The factors of fertility of soil, abundant rainfall, even and moderate temperature, very little sunshine, with a natural sub-irrigation, make the little valley at the mouth of Eel River, especially adapted to dairying.

The actual market value of these lands is from \$350 to \$700 per acre. The rent paid by dairymen averages \$30 per acre.

One dairyman keeps sixteen cows on eleven acres, feeding nothing but what he produces on the place. Feeding concentrated feed, such as grain of any kind, either grown on the ground or bought, is not practiced. The area intensively devoted to dairying is about five and a half miles long by three miles wide and contains about 10,560 acres, on which 8,500 cows are pastured. One day's product of 7,826 cows, of which a correct record was obtained, was 237,160 pounds of milk, from which 10,069 pounds of butter was made, having a market value of \$2,700, making over \$80,000 for butter a month.

Does a dairyman paying \$20 an acre rent make a profit? The total cash receipts from thirty-seven cows kept on an equal number of acres of bottom land, not including the skim milk which was fed to calves and hogs was \$2,721.00, an average of \$73.56 per cow. Deducting rent, we have left \$1,981 for labor and profit. As there is little to do on these dairy ranches aside from feeding and milking the cows, the margin of profit to the dairyman is very good.

There are five creameries, and they certainly make a good profit. They pay the ranchmen what they please for the butterfat, none of them knowing until the 15th of each month what they are to receive for the previous month's delivery. As the creamery managers fix their own prices, based upon the San Francisco market, a good margin of profit is left for themselves.

The balance of lower Eel River Valley is bench land, highly fertile and productive and is in orchards or grain. A great deal of dairying is also carried on in sections other than around Ferndale.

It is natural that several thriving small towns have grown up, the principal ones being Ferndale, Fortuna and Loleta.

Ferndale has a population of about 800 people, and is located five miles from the coast at the base of the Wildcat hills, on the south and west side of Eel River. Within recent years a concrete bridge has been built across the river, linking the section to the rest of the country. The town has been and will be the commercial center of the southern and Mattole portions of Humboldt County.

Fortuna is a prettily located town of 800 population on the east bank of Eel River. It is the trading center for a large farming community. It also enjoys an added prosperity from the lumber mill at Newburg, a mile and a half east. The climate of Fortuna may be said to be perfect. It is far enough back from the ocean to escape most of the fogs, and near enough to experience a cool and even temperature at all times of the year.

Loleta, Rhonerville, Hydesville, Alton and Rio Dell are small settlements of 200 population or less, which are local trading centers. As the county is developed the population of all the towns of Eel River Valley will gradually increase. Fortuna will probably become the chief town.

But the enormous resource of Eel River Basin is the unparalleled forest of redwood which reaches its greatest perfection of growth on the flats along the streams. Eel River, South Fork and Van Duzen flow for miles through a belt of continuous timber fifty miles long by ten miles wide. Many an acre of this timber has brought \$500 for the standing trees. As high as \$2,500 worth of manufactured lumber has been obtained from a single acre. As the area of redwood timber on Eel River watershed roughly estimated is 320,000 acres worth perhaps on an average of \$100 per acre; this resource has a value of \$32,000,000 as it stands uncut. The redwood forests begins on the slopes back of the dairy and bench lands, and all the towns of the valley have a background of blue timbered hills.

At a distance of thirty miles east of the ocean which marks the extreme point to which the fog drifts, the forest stops and Eel River and its tributaries are flowing through an open country, devoted to grazing, locally called the hill country.

Before the white man came there was little timber, for the Indians set fire annually to the range in order to kill the tree growth and furnish grass lands for the deer and elk. In early days the whites also burned the range but with the settlement of the country, this practice ceased. Humboldt County is the natural home of trees, and in the last sixty years nearly half of the open lands have been occupied by fir, oak, and spruce. This new timber is of poor quality, full of knots and perhaps but one saw log to a tree, nevertheless, it has been eagerly entered as timber land by the newcomers, though it is hard to foresee any profit in logging such lands. There are large tracts in sapling sized scrub oak which have been rendered worthless, and there are thousands of acres in chaparral, made up of poison oak, manzanita, and buck brush, which should be burnt, the sooner the better, and thus restore such lands to grass.


Along main Eel River in the southeast corner of the county, near Fort Seward and Alder Point there are thousands of acres which are entirely adapted to the plow and will be number one wheat lands. The soil is rich and deep even on the tops of the ridges and rainfall and climate are favorable.

As the Northwestern Pacific Railroad uses Eel River Canyon for its highway to reach Eureka, the lands along the river will no doubt become the most valuable in the county, and will derive the greatest benefit from the new transportation. For years they have been in a backward state on account of the enormous distance to markets, and stock raising has been the only profitable industry, although the land in the southeastern portion has long been recognized as very productive and especially adapted to fruit raising and general farming.

Fort Seward, is the center of this region and will probably become a large town as a considerable section of Trinity County is tributary to it, and a great deal of development work has already been done in anticipation of an influx of settlers. Almost every kind of land, natural advantage and resource of the temperate zone is to be found in the various portions of Eel River Basin, and like a great system of arteries, veins and capillaries, Eel River flows straight to its heart, the bay section, through the imperial domain of Humboldt.

CHAPTER XIII

AROUND THE BLOCK

HE favorite vacation trip of the people of Fortuna is up the Van Duzen to Bridgeville, then south through the range-country to Harris in extreme southeastern Humboldt, passing through the little town of Blocksburg, from which the trip receives its name. The return journey is made by a different route along Mail Ridge north from Harris, through Fruitland to Dyerville, and then down Eel River to Fortuna.

Leading out of the fog belt into the hot, sunny climate of the interior, passing through constantly changing scenes, which reveal the varied resources of Eel River watershed, this 155 mile journey should be made by every Humbolter, as it can be accomplished in a week's end.

We leave Fortuna, which is on the eastern edge of the dairy lands of lower Eel River Valley, and follow the foothill boulevard, rising gently to the elevated River Terrace, on which Rhonerville is situated. Here is one of the oldest towns of the county, but its importance diminished when the railroad was built, passing a mile from Rhonerville, and the population now numbers perhaps one hundred.

A mile beyond, a sharp down grade is encountered into Wolverton Gulch, where a small stream flowing into Van Duzen has cut completely through the plateau. Coming up at the top of the grade, we begin to pass through Hydesville. This is an agricultural community scattered for three miles along the county road, having its central stores, hotels and halls.

In early days the open untimbered lands were eagerly sought and settled, and the vast forests were considered valueless. Around Hydesville, the farms occupy a strip two miles wide along the north side of Van Duzen River. Back of the open land, the forest grows on the slopes of the ranges.

Dropping down grade, Yager Creek, an important tributary of the Van Duzen is crossed, and we reach Carlotta. It consists of a store, blacksmith shop, a few dwellings and a large hotel, which is patronized as a summer resort. Carlotta is the terminus of a branch railroad. A mile beyond, a settlement, called Cuddeback, is passed and we enter the redwoods. The ten miles of open country from Fortuna to Cuddeback enjoys an unexcelled climate. All along the road are apple orchards, while fields of grain and fine farm buildings testify to the prosperity of the people.

The road now leads through the cool shady groves, climbing and descending the grades one after the other, crossing little streams, sometimes coming out on the high bluffs bordering the Van Duzen, where beautiful vistas of river, mountains, and forests compel us to stop and admire the scene.

We pass through sunny cut over lands, where the trees have been turned into shingles, and are back into the forest again until Strong's Station is reached, where we stop for dinner. An open prairie of rich sediment soil is planted to vegetables and fruit. The luscious cherries tempt, and tempt, and nowhere in the world are there superior ones in size and flavor.

Beyond Strong's the road follows the river banks and crosses the stream three times, and in one instance the road leads over the cobbles and boulders through the murmuring waters in the very bed of Van Duzen. During the winter months a hill road with steep grades is used, as the river then becomes a mighty torrent, full between its banks, and laden with sediment and fallen trees.

Crossing Grizzly Creek, we begin to climb a famous grade, where one may look down 500 feet and in many places the road is built of bridges, as it was found impossible to widen a road along the steep hillside. At the top of the grade the timber thins, the redwood is of young growth—small trees only two feet in diameter. Soon the redwood does not appear and patches of open ground can be seen on either side of the road.

In another mile, the open grazing hill lands of the Bridgeville section are reached. A great deal of sliding ground is passed over. On the opposite or south side of the river, a huge rock has slid down into the river bed. The great gash in the hillside whence it

came can be seen, bare of trees. On the north of the road and river, the grassy lands rise to the saw toothed edges of the ridge. It was now growing dusk and the mirage of sunset made the serrated line seem like distant mountains bathed in purple splendor against the crimson sky.

Soon we pass the China Camp and in a little while arrive at Bridgeville for the night. Bridgeville consists of two stores, a barn, a machine shop, a very good hotel and probably ten dwellings in the immediate neighborhood. It is located on a patch of level ground from which the grassy hills to the north rise at moderate angle. Four main county roads intersect at this point. The northern road comes from the Kneeland Prairie, Iaqua Butte and Yager Sections, the eastern leads to the low gap of Mad River and to Trinity County, where it joins the new State Highway to Red Bluff and the Sacramento Valley.

The narrowing of the river flanked by a large rock, caused the point to be chosen for a crossing of the Van Duzen River, and gave the town its name. In the morning we took the southern road to Blocksburg. It is hard to describe at length this twenty-two mile section. There are a great many grassy hills, with sheep and cattle grazing everywhere, with fences running up and down in every direction. For five miles the road is very crooked, passing over two high mountains until Larribee Creek, a tributary of main Eel River is reached. An excellent road could be built down Larribee to the railroad, opening up a new section and avoiding the heavy grades we have just climbed.

The road now lies along Larribee Creek for fifteen miles and through timber most of the way. The scrubby trees like eastern sycamores grow along the creek bottoms. The fir occupies the hill-sides, some of it is of good quality. At the very head of Larribee Creek, on a low pass, in a range of hills, high up on the summit of a ridge, with fresh spring-water and purest atmosphere, is the mountain town of Blocksburg.

Part of the town drains its waters southward into Conley Creek into Dobbyn Creek and part into Larribee flowing northward. Most of the buildings of Blocksburg were burned some years ago, but the place has never been of much importance, and was made

up only of a store, church, postoffice with three or four dwellings. Two miles south of the town, a side road leads down the steep pitches of the hills to Fort Seward, and the trip around the block can be considerably shortened by cutting across, which I did at one time. Being unused to the heat and sun of the hill country, I took a violent headache and Old Baby, our horse became tired. On the trip down to Fort Seward, we had to get out of the buggy and hold back to help out the horse. Fort Seward was a pleasant ranch of about 400 acres of level ground, surrounded by 10,000 acres of the finest kind of grazing land.

The railroad at the time was not expected to pass down Main Eel, but rather along the South Fork, if it ever was to be built. The grapes, watermelons and other fruits of the orchard were lost to my appreciation, as I became more sick, and the remembrance of the trip up the five mile grade is a nightmare never to be forgotten. Most of the 2,500 foot climb was made afoot, sometimes pushing the buggy to help the horse. Each succeeding ridge seemed like the top of the grade, but only furnished a new disappointment. The road wound around the hill, only to reveal its duplicate, and with tired horse and tired men it was night when the Overland Road was reached.

The main road south of Blocksburg is very crooked, but presents new and novel scenery at every turn. Along Dobbyn Creek, the country sobers down somewhat, and there are thousands of acres of land presented to the view along the road, which will make farms and fruit ranches. It has been the very heart of the great sheep raising country of Humboldt, it will be its greatest agricultural section.

Leaving Dobbyn Creek, the road runs up steep hills and then down to Eel River, which is crossed at Alder Point Bridge. The town of Alder Point is one of the new towns on the railroad. From this point to Harris, the road for eight miles winds up the hill bearing southwest. The Mendocino County line is only five miles south of Harris, so we now turn northward on the overland road along Mail Ridge to make the return trip to Fortuna.

The Overland gets its name from the fact that the old horse stages carrying the mail from San Francisco used this route up

to five years ago, when supplanted by the automobile. It is the dividing ridge, 3,500 feet above sea level, between the South Fork and main Eel River, which are from six to twelve miles apart, for a distance of almost forty miles within the limits of Humboldt County.

The views from the various parts of the ridge, disclose almost the whole of the southern part of Humboldt County. It is a constant wonder and surprise that the roads follow the ridges and seem to seek the highest points. The old Indian trails were followed, and they were through the open country, as a road in timber or along rivers became impassable in the rainy season.

After twenty miles have been covered, Fruitland is reached. About fifteen years ago, a colony of Hollanders were persuaded to settle on the uplands around Fruitland. Almonds and prunes were set out. Their investment and emigration were secured under the worst kind of misrepresentation as to transportation and nearness to market, with the result that the people were impoverished and the colony failed.

The soil of this bit of 2,000 acres of upland is very rich and the orchards are now in full bearing. Soon after leaving Fruitland, the road begins to descend, and the timber is entered. After four miles a very steep grade called "Devils Elbow," brings one within sight of Eel River. Down on the flats along the river, the drive is through the most magnificent specimens of the redwood in the world. One enormous tree is twenty-six feet in diameter, and its height has been variously estimated as 400 to 450 feet. It rises a straight bole 170 feet to the first limb. One does not realize the immense size of these monsters until along side of them. The road winds among them, the cause of new exclamations of wonder, amazement and admiration at every foot of the trip. Nature's masterpiece and unsurpassable! It took 1500 years to produce them, and they are pillars in nature's grandest temples. Vacant must the soul be that can contemplate their stately grandeur without awe and reverence.

Passing Camp Grant, a small open prairie in the timber, set out to all manner of fruit trees, we pass over a steep spur of a range leading down to Eel River, and are again upon a flat covered with



H. C. Tibbitts, Photo.

THE MYSTER



THE FOREST

the Sequoia. We ford the South Fork of Eel River and are at Dyerville, located at the juncture of the forks of the Eel.

Dyerville has long been a trading point made up of one store and a hotel at which we spend the night. Having plenty of time, a side trip for a short distance up Bull Creek was made. This tributary of the South Fork flows in from the west about a mile above Dyerville. The timber on the flat at the mouth of the Creek is the finest and most valuable per acre of any in Humboldt County. The trees measure from three to twenty-five feet in diameter, straight as an arrow, tapering very little to the first limbs one hundred feet or more above the ground. The timber is very dense, and little loss in logging will result.

There are several settlements on the side hill north of the creek, but the road ends eight miles up the stream, so a return is made to Dyerville. From that point the road runs north along main Eel River for two miles and then turns westerly, ascending a grade and comes out of the forest to a glade perhaps a mile square, called Englewood.


Back into the forest again, until we reach Bear Creek, opposite Shively. Here is one of the favorite picnic and camping grounds. A mile on and the little town of Pepperwood is entered. On the opposite or east bank of Eel River all of the timber has been logged for ten miles down to Scotia, but on the western side, the primeval forest stands serene. The pepperwood or California laurel is the only other forest tree, and several groves sometimes a half mile long are passed through. This beautiful tree loves moisture, and will be found where water is present the year round.

Opposite Scotia, we come out on a bluff, known as the "Blue Slide," where the road has to be repaired each year. Another mile and we are out of the redwoods into the open cultivated land of Rio Dell, or Eagle Prairie. We ford Eel River at Robinson's Ferry, getting into some very deep water. The canyon of Eel River broadens out into the fat farming land of the valley. Eight miles more over smooth graveled roads through Metropolitan, across Van Duzen, through Alton, along Eel River, through the orchards, up Sandy Prairie Road, we arrive at Fortuna, having gone "Round the Block."

CHAPTER XIV

"THE MATTOLE"

The Valley of the Crystal Water

HAT part of Humboldt County known as Mattole is a strip of country in the southwestern portion lying along the coast from Cape Mendocino southward to Shelter Cove. In extent it is nearly forty miles long. Its greatest breadth is about sixteen miles. The area roughly estimated is 230,000 acres. This estimate includes a considerable area lying north of the mouth of the Mattole River and drained directly to the coast, and the coast watershed from the mouth of the river southward to Shelter Cove. The area actually drained by the Mattole River is about 160,00 acres. Looking from Gillem Peak southward the whole country has the appearance of one unbroken forest or woodland. But if one looks from Queen's Peak on the south near Shelter Cove to the northward, many grassy slopes are in evidence, as the "prairies" or grass lands are almost without exception on the southern slope. The ranges which are classed as the most productive in California are all in natural grasses and reach their greatest perfection near the coast.

The Mattole River is exceedingly crooked and rapid. During storms which often keep the river at freshet heights for two weeks and sometimes for a month at a stretch, the Mattole flows like a mill race. On its lower course or up to where the upper North Fork joins it, it has an average fall of fifteen feet per mile. Above this point a mile or so, it enters a deep wooded canyon, and in this it remains for almost the entire distance to White Thorn Valley. There are only two short spaces in the vicinity of Ettersburg where it is not walled in by bluffs on both sides, and even here it has a bluff on one side. These bluffs, fifty to one hundred feet high in the lowest places and up to several hundred feet in others, are

the lower skirts of the mountain sides, and while not perpendicular, they are as steep as the nature of the formation will stand.

The most characteristic feature of this Mattole Canyon is its forest covering. Rocky though it may appear everywhere, throughout its whole twenty-five miles of length it is fringed with trees, often of large size, of Oregon pine, live oak, tan oak, madrone, maple and pepperwood. One wonders how these large trees manage to cling to and grow on these steep bluffs or else the traveler gives himself over to the enjoyment of the beauty of it all. Only the Mattole rainfall combined with the Mattole summer could produce it and such beauty of scenery is not produced often.

With the crystal waters in placid pools reflecting like a mirror, or in sparkling ripples, it flows along, now over a clean gravel bar or over across against a rocky bluff fringed with young rhombifolia alder or maybe trees fifty feet high. In shaded nooks we find the dainty five fingered fern and soft green moss. The elegant dwarf vine maple, and the white flowering dogwood attract by soft cool green in summer. This is the land of enchantment, here in the canyon in the warm summer days.

As Autumn approaches the vivid scarlet of the vine maple, the dogwood and the wild grape vine; and the pure gold of the ash, the Oregon maple and cottonwood, with varying shades of green of the alder, Oregon pine, pepperwood, madrone, and the evergreen oaks as a background, form a dream of loveliness for those who enjoy nature's beauties or would care to tramp the twenty-five miles through this canyon. On the tributary creeks the canyons are narrower, densely wooded and arched over by forest trees. There it is, too, that the ferns grow in abundance.

After the river emerges from the canyon into what is by general usage termed Mattole Valley it loses none of its picturesque beauty. Here the pools are larger and the country more open. The characteristic scene is the wooded bluff on one side of the stream first fringed with the young growth of the rhombifolia alder, higher up the pepperwood, maple, live oak, madrone and firs. On the opposite shore is a clean gravel bar studded here and there with bushy alders or with a fringe at the water's edge of alder and willow. Such is the Mattole River and the restful peace of its summer mood.

In the stormy weather of winter what a change comes over this dream of poetic tranquillity. From placid pools and murmuring ripples wafting sweet music on a balmy mountain air, the power and energy of a mountain torrent is loosed. The wild roar of rushing water, plunging against the jutting ledge of rocky bluff, swirling and boiling as it tears over its rocky bed to the opposite shore only to find another bluff, dares you to cross its wild, picturesque cruel and hungry madness of unchained energy.

The Mattole River is a typical mountain stream, crooked, rocky and rapid. Its water is extremely clear due to the filtering geological formations of sandstone and shale abounding all through the section and also to the fact that so much of the country is covered with forest. It flows into the ocean from the northeast and three miles up stream it makes a right angled turn and flows from the southeast and parallel with the coast line. In no place does it get more than nine miles from the coast. Indeed at the source the Mattole gathers its water but a mile or two from the Pacific Ocean south of Shelter Cove and just across the line in Mendocino County.

To most people the word "valley" in general usage defines a level plain or at least level benches along the course of the stream. Still the word "valley" has another application when it defines a trough between the hills wherein flows a stream. The Mattole Valley is a little of both, with a leaning more to trough than to plain. There are occasional alluvial flats along the river, but these are of no considerable area. By far the greater part of the cultivable areas are the gentle slopes of the hills. While the Mattole drainage basin contains about 160,000 acres or one-fourteenth part of Humboldt County, the part of the basin familiarly known as the Mattole Valley represents but a few thousand acres. This is divided into three smaller basins. The first of these is at Petrolia. Nearly all the grazing land is to be found in this basin. Five miles beyond Petrolia is Union Mattole and in the upper end of this second of the basins is Upper Mattole. Fifteen miles beyond the confines of the Upper Valley is Ettersburg. Here is something of a fourth basin, but the flat land that lies directly on the river amounts to only a few acres with several hundred acres of bench land on the low hills about. From the mouth of the river to Ettersburg, the

general Mattole basin is broken in several places by girding spurs of the mountains projecting almost across the valley.

Above the mouth of Honeydew Creek and just beyond Ettersburg, the river flows through its canyon and it is all spurs and mountains for twenty-five miles until White Thorn Valley is reached where there are several hundred acres of tolerably level land, mostly in White Thorn thickets and redwood forest. These three small basins, more or less well defined, comprise the whole of the level land and it can be seen that Mattole Valley is neither open and straight or continuous as far as arable land is concerned.

The climate of Mattole Valley is much different from that of other coast valleys of California and unlike the climate of the rest of Humboldt County. That the air is clearer, and the skies brighter no one acquainted with Mattole will deny. Mattole's freedom from fog is due to the fact that it is hedged in on all sides by comparatively high hills and that the wind will not catch the fog bank hanging over the ocean shore and boost it over the steep and rugged walls of the Cooskie, King's Peak, and Paradise ranges of mountains which lie between Mattole Valley and the sea.

In soil and climate, Mattole is blessed with the most essential natural elements for the perfect growth of trees and fruit. A great deal of light and sufficient warmth is essential to sweetness, color, texture and aroma, in any fruit. The characteristic soil formation throughout Mattole is devoid of rock or hardpan near the surface, thus giving a soil of wonderful depth even on the tops of the mountains. During six months of the year, the copious rains amounting to over one hundred inches, saturate to overflowing all the soil. All these cloudy days, that shut out light, are in the winter, while the trees do not need abundant light. During the whole growing season, the almost cloudless skies give ideal conditions for growth.

And the last act completes and rounds out the symmetry of the whole. While moisture is withheld from above, it rises by capillary attraction from below and the trees do not suffer from drouth. As the surface dries the air gains access to the soil, penetrating deep down, oxidizing minerals for future plant food and supplying oxygen to the soil bacteria, thus disintegrating the particles and enabling the roots of the trees to penetrate deeper and deeper.

The perfect trees of Mattole are sturdy, symmetrical in form and clothed with a wealth of foliage, perfection in every leaf. The mountain ridges which break across the valley form a thousand shelter nooks where the trees are protected from harsh and disturbing winds. As we ascend the river and get less of the coast air and more warmth and light the trees show more abundant and perfect foliage. It is only natural that where the oak reaches its greatest perfection that the apple will be finest in quality.

Mattole is credited with growing exceptional apples, and the Mattole apple is often referred to as equal to anything grown anywhere. The first orchards were planted in the early 50's and many of the trees in these old orchards are robust and vigorous and produce good fruit yet. The best apples are grown in the vicinity of Ettersburg on account of perfect shelter, deep light, open top soil and a decidedly clayey subsoil, and far enough back from the ocean so that the locality has the greatest amount of bright clear sunlight. Another factor is the production of the Ettersburg apple, rich in sugar, fragrant, highly colored and perfect in rounded out firmness, texture and maturity, is the skilful work in horticulture done by Albert F. Etter, an expert in plant life.

Quite a strip of country along the north wall of the valley from upper North Fork of Mattole River on up the river or mountain side to the vicinity of Briceland, in sheltered nooks of deep soil, is best adapted to the growth of the most perfect apples. There is a limited area also on the west side of the river above Briceland Creek that is out of the general air currents and well protected from the north.

Of the many varieties of apples that have grown in Mattole, those that should be chosen for commercial plantings are but few. For early varieties, Red Astrakan and Early Harvest are very desirable in lower Mattole. At Ettersburg, the Northfield Beauty, an apple of the Jonathan type and Manx Coddling, similar to the Early Harvest have been found very desirable. But of the early apples the best for commercial planting is the Gravenstein. It succeeds best at a considerable elevation. The next best market apple is the Pippin. Other fine varieties are the Jonathan, Baldwin, Wagner and Spitzenburg. The main difficulty to be met

in the business of fruit growing is the distance to market and the lack of transportation, factors which can be overcome.

Other fruits, the peach, pear and strawberry do as well as the apple and during the past year the setting of commercial walnut groves has been begun. The principal industries at the present, and during the past thirty years, are stock raising and the preparation of tan bark. Roughly estimated three fourths of the Mattole country is timber land. Douglas fir, and tan bark are the most valuable trees. The fir, or Oregon pine, in many places is tall, free from knots and well developed. The forests are not dense or exclusive and most of the pine timber is now of prime mature growth, three to six feet in diameter and remarkably free from rot. The timber on the northern exposure is unusually free from pitch. Very little of this pine has ever been cut into lumber, only two small sawmills have ever been operated, but it is said that the lumber is of exceptionally good quality, fine grained, soft and excellent for finishing work.

The tan bark oak ranges with the Oregon Pine, and the extent of the industry may be judged when one learns that over \$100,000 worth of tan bark was shipped in 1913 from one landing at the mouth of the Mattole. From Shelter Cove a great deal more than \$100,000 worth of bark and extract is shipped, but the larger part of this tan bark is not obtained from the Mattole but rather from the Brice land and southern Humboldt section of the South Fork of Eel River.

In peeling the trees, the bark is first cut directly at the ground and again at about four feet from the ground. This first ring is then removed and generally a second ring is taken off before the tree is felled. The log is then limbed down and the balance of the bark removed. It is then cut into slabs 12 to 16 inches wide and placed to dry. In drying the bark forms a tight roll. It is packed out on mules by trails to a wagon road over a country so steep that without trains nothing short of a monkey could climb out.

The tan bark oak reaches maturity at 150 to 200 years of age and then begins to decline. The trees vary considerably in the amount of bark they will yield as well as in the quality. The best bark is a deep red and fleshy when green, and dries out slowly, while

inferior bark is light colored and fibrous, and when dry, is light in weight. As bark is sold by weight, 2,550 pounds to a cord, quality as everywhere counts. The peeled logs are left to rot in the woods which seems a great waste, but the timber can only be peeled from the bark from about the 15th of May until the last of August, or while the tree is in full sap, and this is the very poorest time to cut the timber for milling purposes. Within a few hours after being peeled the logs begin to check, in a week the checks are to the center of the log, in a year or two the log is rotten and worthless. The stump sprouts the next year and fifty or a hundred years after a second crop of tan bark can be harvested.

About one-half of the tan oak has been cut but from Queen's Peak north to Upper Mattole, a distance of eight miles is yet untouched and is recognized as the finest tan bark forest in the world.

Other forest trees in Mattole are the live oak, black oak, white oak, chinquapin, madrone, which includes the largest specimen in the world, pepperwood, alder, white fir, some cedar, and a few groves of magnificent sugar pine on the slopes of King's Peak.



Land's End, the Ultimate West. Nature's far flung outpost in the unending combat between sea and continent.

CHAPTER XV

AN AUTOMOBILE TRIP THROUGH MATTOLE FROM FERNDALE TO CAPE TOWN



ALTHOUGH I have used about every form of conveyance in covering the roads of Humboldt, the earliest trip which I took by auto was to Cape Mendocino, then up Mattole to Briceland, down the South Fork of Eel River and back to Eureka. The horseback rides were exclusively in 1905 except one from Rio Dell to Mount Pierce in 1910. The walking trips were all made during 1905-06-07, most of the trips behind Old Baby in the buggy occurred during 1906-07-08-09, and then began the reign of the auto in 1910-11, and the railroad in 1914. I had made several short trips to Cape Town, and to the tops of most of Rainbow Ridge which separates the watershed of the Eel River from the Mattole, but a complete and thorough trip had never been accomplished until August, 1910.

As one drives off the streets of Ferndale, he takes the down coast or Wildcat road, a grade which for seven miles climbs to Bear River Ridge. The road does not lead to the summit directly, for one does not cross the ridge until Mazeppa, one of the Russ ranch houses, is reached some twelve miles from Ferndale. It is a long climb to what is commonly spoken of as the Wildcat.

The first two miles of the road is gravelly or sandy up to what is known as the "sand cut" or "bluff." When one gets this far up, he can get a fine view of Ferndale and Eel River Valley. Across Eel Valley on its eastern and northern flank can be seen the white buildings of Rohnerville, Fortuna and Loleta, looking for all the world like little toy villages in a sand pile that has been moulded by the children into a valley. Back of these villages are the red-wood clad hills that reach up to the open grass prairies of Iaqua and Kneeland, and, in short, you can view more or less of the whole country to the north and east.

From the sand cut to the top of the Wildcat the formation is soft shaley clay. The Wildcat country contains no rock of even moderate hardness yet it is a very rough and broken section of country. The whole landscape consists of the sharp edges of the ridges and the steep slopes leading down to the bottom of the gulches, due to the erosive force of water acting on a soft and friable formation. Up to a few years ago the Wildcat had a protective covering in a fine forest of Oregon pine, cedar and spruce which would naturally retard the washing down of the ridges and the smoothing down of the land. In 1885 a forest fire swept through the Wildcat country and killed hundreds of acres of this forest. What a sight it is today, logs, burnt snags and deadened trees are as monuments in a graveyard, mute witnesses telling how one of Humboldt's forests was wasted.

Parts of the Wildcat have been reduced to fair grazing land. Patches of green clover are to be seen down towards the bottom of the gulches where Swiss dairymen are gradually bringing the land into the butter-producing class. The exceeding roughness of the land alone is the most formidable obstacle to its utilization for agricultural purposes.

During the earthquake of April 18, 1906, a land slide of some 200 acres just north of Oil Creek, slipped into the ocean, forcing its way out for about a half a mile. The breakers rapidly washed much of the point of the slide away. Vegetation now completely covers the slide. It is interesting to note how quickly a piece of this section of the country will smooth down and again be covered with vegetation, even when left in a state of unspeakable roughness, such as was the condition of this slide just after the earthquake.

From a scenic point of view, the route traveled over does not give a view of the country to the best advantage. Looking over the relics of the forest that once clothed the rough Wildcat hills, reminds one too much of a neglected cemetery scene. The entrance to Eel River, Humboldt Bay and the headlands and mountains far to the north are all plainly visible on a clear day. The distant scenery to the northeast is too often marred by the hazy atmosphere characteristic of low coast country. One does not notice this so much from below as is the case when at an elevation of 2,000

feet or so, as the haze hangs over the low country at about that distance from the earth.

Just as the automobile approached the turn marked by a great black snag of a burned tree, I drove the front wheel too close to the edge of the road. The soft earth began to crumble, and the auto turned over. We both jumped, and as I was on the right hand side toward which the automobile was tipping, I made a record run in a diagonal direction down the hill. The auto turned slowly over, fell against a fence bordering the right of way, broke the posts, and rested upside down on a narrow shelf on the hillside.

Down 500 feet the hill slopes to the canyon, and had it not been for the fence post to check the fall, and that little shelf to receive the machine, our automobile trip through Mattole would never have been accomplished.

The first care was to unscrew the gasoline tank, which was slowly dripping empty through the air hole in the cap. This being done the various movable parts, such as cushions, robes, etc., were removed from under the machine, which rested on the back of the rear seats and the radiator. I walked back down the road a half a mile to a ranch house and fortunately they had two sets of block and tackle which I borrowed and carried back up to the scene of the accident. I might mention that the scenery did not interest us just then and a blue haze obscured a great many objects.

After an hour had passed, and the mail carrier who had only one horse hitched to his wagon, a three horse wagon loaded with iron pipes for the oil well which was to be bored on Bear River next came up the grade. He helped us out, first passing us, unhitched his horses, fastened the tackle to the old black snag on the other side of the road and pulled the machine on to the road right side up. It took us only a few minutes to get the gasoline tank, the cushions, etc., back into the auto, and most fortunately the engine ran. Our damage consisted of a dented radiator top, a door jammed through by the fence post, a couple of lamps smashed, and a few minor scratches. Off we started, passing from the Wildcat to the Bear River Ridge.

The only scenery I saw for miles was the roadway, but before we reached the southern slope of the ridge, I was ready to take notice

again. Bear River is a very different sort of country from the Wildcat. Its surrounding slopes and comparatively smooth contour all go to show a solid rock formation as the underlying foundation. It has little forest land on the coast and for fifteen miles up the river from the ocean it is mainly open land, which is rated as furnishing some of the best upland grazing on the coast.

Though the soil in Bear River Valley is good, it is the best on the southern slopes. At the present day these grazing lands are far from what they once were, owing to the over stocking. It has a cool summer climate and much fog. On parts of it, as might be expected, owing to the cool, moist climate, perennial grasses are numerous and the feed remains green much later in the season than is characteristic where the climate is warmer and drier, and annual grasses predominate.

The canyon of Bear River is very narrow at the best and as the distance from the crest of the ridge to the floor of the valley is short, a very steep down grade is encountered, forcing the use of brakes and compression of the engine. Just before reaching the bottom of the grade, a sharp turn is encountered, and care in driving has to be exercised. It would be very easy to keep on going and take a tumble of almost 200 feet.

Cape Town is located on the flat land near the ocean level and consists of a feed stable, postoffice, hotel, store, blacksmith shop school house, hall, a dairy and its necessary buildings. It has but one broad street, lined by eucalyptus trees. Both the hotel and the feed stable are plainly labeled, so no matter from which direction the stranger enters the village, he knows where he is. Cape Town is a trifle over a mile from the ocean and travelers and their teams generally stop to get something to eat. After a very good dinner, we fed the automobile with fifteen gallons of gasoline at thirty-five cents per gallon.

Bear River is a stream only about twenty miles long and enters the sea through a narrow defile. There are several pretty and valuable little farms, patches from five to twenty acres for six miles up stream. There is not much bottom land. The fine grazing lands are on the north side of the river, presenting a south face to the sun. The slopes south of the stream are wooded.

There is a vein of marble, considerable limestone, a fine divided deposit of shale which would make an excellent Portland cement. Water power is easily obtained. The indications of oil and gas are prevalent throughout Bear River Valley and for the next ten miles south along the road to Mattole Valley. A well defined belt of small oil seepages and gas flows, runs in a southerly direction for fifty miles, from Bear River to the southern line of Humboldt County. Probably forty oil wells have been sunk during forty years, but the first paying well is yet to be brought in. Six or seven gallons per day is the maximum output of the best well obtained, and this less than one hundred feet deep. Some wells have been driven to more than a 2,000 feet depth, so the territory has been fairly tested, and gives no promise of a large production. The whole of the slopes running up from the southwest to Rainbow Peak is a cross section of the strata, which has been exposed over a distance of five miles. The shales are from 500 to 1,500 feet thick, and alternate with fine gray to bluish sand stones which run from three inches to ten feet in thickness. The shales are bluish to gray in color, of a soft formation, easily affected by the weather and carry the oil and gas. They give rise to numerous slides and the broken sandstone included in the shales gives forth indications of petroleum by oil seepages, or gas seepages, or by odor of gasoline when a strong wind blows across these shale areas. As it has been definitely determined how the oil or petroleum originated, it might be well to briefly sketch the process.

About two millions of years ago a shore line in Humboldt County ran along a line represented by the eastern foot of Bear River Ridge, Rainbow Ridge, Elk Ridge, Grasshopper Ridge and Bear Buttes. These follow a southeast direction as they are named. Roughly, the line passes just west of Garberville, runs north along the south fork of Eel River, along the main Eel to Shively through Carlotta, then to the east of Eureka and enters the ocean just north of Little River. A coastal plain about eight to twenty miles wide occupied the place where the east side of Mattole River Valley and all of Bear River Valley and Ridge are now. This coastal plain was gradually built up by the wash from the ancient mountains to the east, which filled in the shore as it gradually sank until 1,500

feet of mud was deposited, which is represented by the shale which we now see and the overlying 750 feet of sand was put down over it. As the deposits were laid down, the land would be alternately under and above the surface of the water, in which millions of fish, mollusks, sea-life, diatoms and especially vegetable growth flourished. Their bodies were embedded in this mud and decay prevented and the hydrocarbons formed. Additional deposits, long since eroded, increased the thickness of the deposits as the sea floor sank. Internal heat of the earth distilled the hydrocarbons in the closed retort of an overlying hard strata and as gas pressure grew the particles of oil were squeezed out and collected into pools, especially if the shales are underlaid by sandstones, which is called the "oil bearing sand." This is exposed in the beds of creeks in a few places throughout the country. At the time of the uplifting of Rainbow and other ridges, the crust of the earth was folded. The upward folds are called anticlines and the downward folds called synclines. In Humboldt there was a fracture of the upward folds at the top. The stream beds began in these fractures and have cut down until the anticlines were worn away. This has resulted in all the present ridges occupying what was once the lowest parts of the ancient folded country. All the closed anticlines in which oil in profitable quantities might have been found, were thus washed away, and only the smell is left.

The most profitable oil wells will probably be obtained by driving in tunnels into the ridge and striking an oil bearing sand down its dip. As the oil seeps into the tunnel it will flow out and can be collected in tanks. This works continuously and the cost of taking care of the plant is practically nothing. A number of wells producing five barrels of oil per week can be made to pay. As it costs nearly \$30,000 to sink a well and a great many wells have been sunk without success—the hope burns fitfully in only a few breasts among Humboldters. The money had better be spent in developing resources of other kinds.

The oil found now is high grade with a paraffin base, and makes good lubricating oil as it seeps naturally from the ground, and in times of emergency it has been used in lamps.

CHAPTER XVI

“CAPE MENDOCINO”



ONE evening in the summer of 1908, I started from Cape Town to walk over Cape Ridge to spend the night at the Ocean House, with the intention of visiting the lighthouse and Cape Rock the next morning.

Passing by the burning gas spring on the left side of the road, which was visible all the more plainly in the gathering dusk of the evening, the long five mile grade over Cape Ridge had to be climbed. Not a great deal can be said of the scenery, geological formations, the resources and other points of a country through which one passes at night, and after two hours toiling up the grade, the road began to descend rapidly towards the beach.

The light twinkling in the distance indicated the location of Ocean House. It is one of the six or seven houses belonging to the great Russ Ranch which comprises approximately 60,000 acres on the south slopes of Bear River and Cape Ridges. This is the only dwelling place in twelve miles on this part of the road, and hospitality is extended to belated travelers, so I put up for the night. The ocean with its line of surf is only a few hundred feet away and the winds in the vicinity of Cape Mendocino are extremely strong. The deep and ominous roar of surf pounding since time began on the sandy beach is heard throughout the night by one unaccustomed to it. The light in Cape Mendocino lighthouse could be seen, a mile away, blazing its warning to the mariners off this dangerous coast.

In the morning I started out for the lighthouse. The county road does not pass by the lighthouse, but a private road swings off the main road at a point on the side of Cape Ridge, elevated about three hundred feet above the Ocean House and half a mile distant. I walked back up to the junction and followed the government road around the hill for a little over a mile and arrived at the

lighthouse. It is 327 feet above the water and about half way down from the highest point of the ridge. It is a wild place and a wild scene even on a mild day as the wind reaches forty miles an hour some time during each day. The furious battling of the elements around this bold promontory must be awfully sublime and fearfully grand when the storm king is abroad in all his wrath. The place becomes a veritable maelstrom. The dashing waves are flung far up in the air and the white salt on the glistening sides of the promontory and rock 150 feet above the tide are offering their mute testimony of the force of the storms.

The keepers of the light do not venture out at such times as they would be blown off the Cape. Marvelous tales are told of the strength of the wind playing around Cape Ridge. In heavy storms the teams are obliged to stop and lay over until the wind abates, sometimes as long as two or three days. In other words rather than be blown backward while trying to make headway against the winds, they quit hauling supplies over Cape Ridge. Often times the bridles are torn from the horses' heads and the searching zephyrs unharness the teams.

This section of Humboldt is the most westerly point of the United States and is a prominent mark for the trade winds to strike. On the days I have traveled in this section, the weather was mild, a light wind was blowing, so some of these stories are only told on the authority of others.

The large sugar loaf rock known as Cape Rock lies about five hundred yards from the mainland and is in a direct line south of the main prominence of Cape Mendocino. It is between four and five hundred feet high and at high tide is separated from the coast, but at low tide one may walk out to the rock over a wet gravel bed, while the heavy seas lash and break on either side. I walked, rolled and slid down the Cape from the lighthouse clinging to any support and in a short time got down to the beach. I would not want to try to climb the hill, and having the choice in the matter I didn't when it came time to leave.

The rock is very large, viewed from near by and on the level of the beach. There are seven large caves entering the rock at different points. Two of them are nearly two hundred feet in

length, and large enough to admit a person in an upright position to any portion of their recesses. These caves have been hollowed out by the force of water, literally cut out by the sea. Inside of one, the sobbing, hissing and groaning of the waves as they come rolling into the caves beneath or just at the water's edge produce an uncanny feeling. At times when a large wave strikes the coast, a roar, that reverberates and echoes, is deafening, confusing and appalling.

One of the caverns on the south of the rock has a supply of fresh water which drips from the ceiling and forms a small rivulet. People entering this cave have camped for several nights and easily obtained enough water to make coffee. There is plenty of wood, ready for use and dry.

The second cave is entered from the southeast and is the most interesting of all seven. It is the largest and there are numerous shelves and benches along its entire length, which seem to have been purposely arranged for the accommodation of the sea-lions.

They are upholstered in a superior style, soft as velvet, being completely covered with the hair of sea-lions, which sticks fast at one end, leaving a cushion that is hard to beat. The cave is a sea-lion's den, several now occupy it and when disturbed, dash out barking their protests at the intruders. In years gone by this coast gave shelter to thousands of these animals, which are not so numerous now as they have been hunted until the rookeries contain but a few.

The sea-lion is several times larger than the common seal, has a long neck and a ferocious look. It is very active and lives on fish. It works and feeds at night, often swimming out twenty miles to the sea in search of food, and coming up during the day on the rocks and benches to bask in the sun. It moves very slowly on land dragging itself along as if completely exhausted by the effort, groaning all the while, except when excited or pursued, when they run along with a curious galloping motion. They look very fierce, with their mouths wide open, and will run directly at an intruder. This is mostly bluffing, and if one stands his ground, in turn endeavoring to attack, the sea-lions will veer off and plunge into the ocean and swim rapidly away. The sea-lions of Cape Rock

were hunted several years ago for their oil, by a Captain Smith. He would climb to the top of the rock by means of ropes and ladders from the opposite side from where these caves were. He then descended with the help of a mere line about half way down the rock, at which point there is a perpendicular precipice, for about one hundred feet. At the foot of these are the benches, several of them, which fall in succession to the water and which are the grand parade ground for the animals. When the sea-lions come up out of the water, they are generally first seen near the line of surf, when they crawl up by degrees frequently lying down as if to sleep, then getting dissatisfied with the resting place, move higher up. In this manner they ascend the three or four ledges of Cape Rock until they reach the topmost. The principal seasons for going ashore are when about to shed their coats, when the females bring forth their young and the mating season. When they come on shore for the purpose of shedding, they remain out of the water until the old hair falls out.

They are naturally gregarious. The bulls usually maintain a harem of as many females as they can protect, the bachelors gathering by themselves. In the spring the females and young stay on the beaches, the young learn to swim in the shallows, but they are desperately afraid of the water at first.

Captain Smith had a rope ladder hanging over this one hundred foot precipice, by which the hunter could climb down to a convenient shelf, where he had a good view of the sleeping monsters below. Everything being in readiness, the work commenced by shooting about thirty, selecting the bulls and killing those nearest the main rock to prevent their rolling off into the water. After the required number had been killed, the man descended with his big knives and other instruments drove the remaining animals off the rocks. The blubber was cut away and dropped over the edge of the bench to a flat. It was then taken ashore, minced up fine, thrown into a cauldron, where it took about two hours to try out. The oil was poured into a cooler and flasked. From ten to thirty gallons was obtained from a single animal, and the oil sold for about fifty cents per gallon. All through it was a laborious and somewhat dangerous work and attended with much exposure.

Nearly all the coast south of Cape Mendocino to Shelter Cove is rocky, rugged, with many caves, the off shore full of islands, which have their rookeries, although the sea-lion was almost exterminated by hunting. During the past few years their numbers have been increasing. The largest of the island rocks off shore, is south of Cape Rock, and just below the Ocean House. It is called Steamboat Rock, from its fancied resemblance to a steamboat. In the spring of the year, the eggs of the sea birds make white splotches over the surface of these rocks. All of the gulls, pelicans, cormorants and puffins nest here and cover the rocks with their numbers.

The gulls are valuable. They are the scavengers of the sea. It is interesting to watch them soaring on the wing always on the alert, watchful for fish, and the moment one sights a meal, a hundred flock to where he is, either to find something similar, or else to dispute possession of the prize.

There are enormous quantities of fish in the waters off the Cape and the shell fish cluster in myriads on the rocks along the shore.

The great battle between land and sea has raged for centuries here at Mendocino. The advance guard of the land forces is three miles out from the shore, where the blackened rocks extend far out as reefs. Blunt's Reef is so dangerous that the government maintains a lightship over its position, and on clear days the vessel's bright red painted sides can be seen. At night its twin lights burn to warn the vessels of its dangerous charge.

The light maintained on Mendocino Cape is of first class and its powerful beams on clear nights can be seen thirty miles out at sea. The light consists of a single lamp, magnified thousands of times by prisms which catch and reflect the rays again and again from angle to angle.

For years it was the only light, but during 1913 the lighthouse on Point Gorda ten miles south was completed. On account of the fogs, in spite of warning by powerful sirens, bells and lights, many vessels have met their doom on the rock bound coast.

The lighthouse is kept scrupulously clean and the land on which it now stands is a government reservation.

On clear days, of course, the view of the wild, jagged ocean shore, the isolated rocks, which time and ceaseless action of the waves

have separated from the mainland, of Point Gorda to the south and Cape Fortunas to the north, is grand. But on the whole, Cape Mendocino is no summer or winter resort. It is an interesting point to visit and the tourist feels that he is a discoverer and is a kindred to Balboa when he mounts America's Land End and gazes out into the broad stretches of the Pacific.

CHAPTER XVII

AN AUTOMOBILE TRIP THROUGH MATTOLE

“From Cape Town to Briceland”



As one leaves Capetown, you drive over Bear River Ridge, crossing a small creek, and to the left or east of the road is a burning gas spring which flows out of a pipe to the height of two feet. This has been burning for years. The ground for about thirty square feet is aflame and is hot. I had my photograph taken seated beside the spring at one time and Mr. R. H. Bowman who handled the camera, kept insisting that he could not take the whole without me moving more into the center of the picture. The owner of the hotel in Capetown gathers this natural gas into a container and uses it for heat and light.

One of the very early white settlers Michael Schallart tells that long years ago there was a much larger gas spring in the vicinity of the blue slide to the west of the road, but that it was covered over by a landslide. About seven miles up Bear River is a wonder. It is one mass of blue flame covering over ten square feet of ground, and an extremely strong flow of gas has continued for years. There are several other smaller gas springs and oil wells, all have gas flowing with a strong pressure.

Almost immediately after leaving Capetown, the grade has to be climbed over Cape Ridge. The road is well laid out, but rather tortuous, and the grade is too heavy to be a nice comfortable road to travel, though doubtless about as good as the lay of the country will admit. In fact it is the counterpart of the road leading down into Bear River Valley on which we burned the brake bands.

Cape Ridge is similar to Bear River Ridge, but has much more timber. On top of the ridge, the road runs on fairly level ground for two miles, an old flood plain of the prototype of Bear River, and the grass lands are good grazing grounds. The grass is actually

kept short by the winds which make Cape Mendocino their headquarters. Rounding some of the hill turns along the road the wind blows very strong even on mild days. Just before the grade again descends to the ocean level, a fine view of the shore south of Cape Mendocino to the mouth of Mattole River, a distance of thirteen miles, is obtained. In some places there is a narrow beach, in others nothing but blackened rocks that in reefs extend far out to sea. Scattered along the coast are numerous black islands. In a very few places, narrow grassy flats lie between the bluffs and the beach sands, but in others the breakers come up to the very foot of the sloping hills.

Coming down from Cape Ridge, one again comes back to the beach some five miles from Capetown at what is known as the Ocean House, the property of Joseph Russ. The life of this pioneer was one continual accumulation of land. He first settled on Bear River Ridge at what is called Spicy Breezes Ranch, which he pre-empted. He afterwards homesteaded the Mountain View Ranch. At the time of the Indian troubles, his nerve kept him buying out all the stockmen who became afraid and parted with their holdings both in cattle and land at panic prices. If land was bought for a song, Joseph Russ sang all of the time for many years. His estate has over 100,000 acres of fine grazing land in this section alone, to say nothing of 80,000 acres more in various parts of Humboldt. A little way to the south of Ocean House out to sea is Steamboat Rock, further south is Devils Gate rocks, then the road crosses Davis Creek, and five miles along the beach brings the traveler to the foot of Domingo Hill, where the road again leaves the beach. Here is where the greatest activity in boring for oil has been exhibited, especially at a point about three miles back from the coast at the head waters of Davis and Walkers Creeks, and McNutt's gulch, a small branch of the north fork of the Mattole. A few wells were bored near the ocean, the deepest being 1,700 feet, but the strongest seepages and gas flows occur in the vicinity of Jesse Walker's ranch where the Wildgoose (1,033 feet deep) and Far West wells were bored.

The beach road is good, bad and indifferent, in some places graded, in others it takes over the grassy flats just as nature left

it, and it is as good as the average of roads too. Only in one place, at Devils Gate, it is sandy. The roughest places are where slides have been washed down by small creeks. When the north wind is blowing, picking up sand and gravel to hurl in the traveler's face as it goes howling down the coast as only a beach wind can blow, the journey is not so pleasant. At no place does the road take to the surf. The road leaves the beach twenty-three miles from Ferndale, and begins the ascent of Domingo Hill two miles long, which takes its name from Domingo Zanone, a man who in early times realizing the future value of these fine grazing lands, bought the land when it was cheap. Passing over the crest of Domingo Hill, a stretch of down grade leads into a rather sharp ravine known as McNutt's gulch, a scene of one time oil excitement. A few hundred yards further on, is the residence and stock range of Levant Cook. It strikes the traveler as strange that in the whole distance of twenty-seven miles through all this rich grazing country, there are only two houses. The closely held ownership of the land in big tracts can be no better illustrated. As one leaves Mr. Cook's place, he drives over what is known as the "Table," overlooking Petrolia. Here, too, is the first glimpse of scenic Mattole with her rounding hills, and flats and timbered ravines and often grassy glades. The road winds down a hill in a southeasterly direction, across the north fork of the Mattole River, and the well located town of Petrolia is reached.

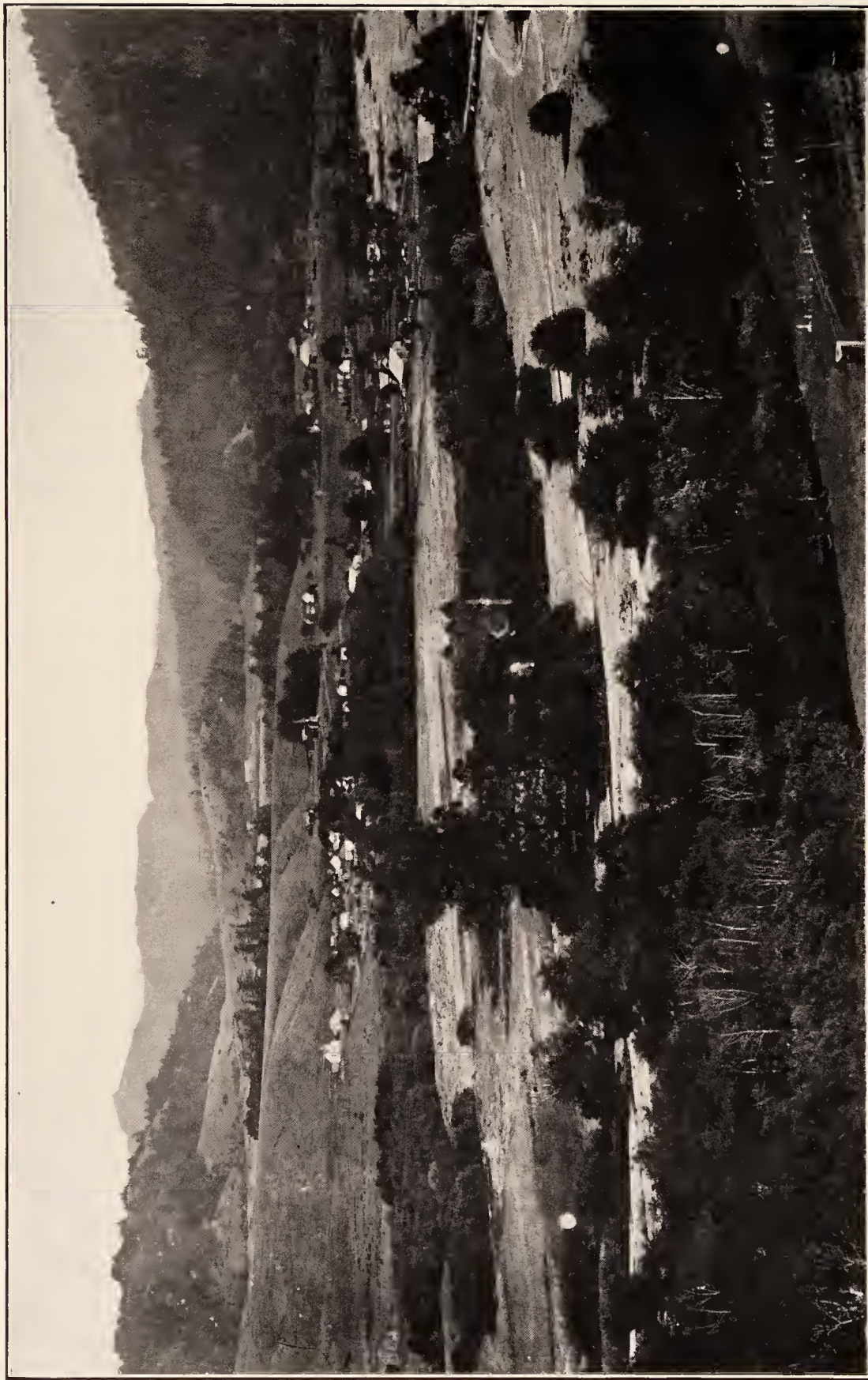
It is a quiet place with mild climate, situated in a basin on the flats of Mattole River, three miles from the beach by direct lines and five miles from the mouth of the river. It seems to be entirely surrounded by an amphitheater of hills, open grass lands on every side except looking south to the timber bluffs of Cooskie Ridge.

Petrolia is eighteen miles directly south and two miles west of Ferndale. By the wagon road however it is thirty mountain miles. The town consists of a store and postoffice, hotel, blacksmith shop, K. of P. Hall, a public school house, a feed stable and about fifteen residences. There are also a number of farm houses quite near town, or as the natives express it, "just outside the city limits." The north fork of the Mattole River, which was crossed just before reaching Petrolia, is an awful example of a stream carrying

more gravel than it can dispose of, and it suffers from chronic congestion. Long years ago, when the white settlers first came into Mattole, the north fork was a nice sort of a stream flowing between well defined banks through beautiful clover meadows. A huge slide came into the stream in the canyon above and the gravel from it filled the whole channel of the creek. It carried so much gravel thereafter, that it builds the bed up so high that the water rolls off to the side. It then fills that side up, so that it has to take to the other side. Thus it keeps worming about gouging a little more land out each time it strikes the bank.

Leaving Petrolia the road crosses Mattole River, about a mile out and ascends a ridge two miles to again descend and cross the river; ascends, descends, crosses the river again within a mile of Squaw Creek, rises over another ridge and again crosses the river two miles on at a point called upper Mattole, the homestead of the Roscoe family. The river is the crookedest thing one ever saw. The hills intrude upon the river alternately. A very good idea of the river's course may be formed by interlacing the fingers of the two hands as far as they will reach and considering that the fingers are the hills, and that the water finds its channel around the point of each hill. It is very picturesque, but one cannot tell whether he is on this side of the river or the other. It runs in every point of the compass and seems to run up the country as well as down. The hills again open out into a real valley at upper Mattole, narrower than at Petrolia, but much more attractive. Restful is the proper term to use. On both sides of Mattole are some very fine ranches, devoted mostly to stock raising, although some fine fruit for domestic use is grown. The mild sheltered climate with clear sky, the soft, rounded, grass covered foothills, backed by higher timbered mountains in the distance; the level, broad, fat acres producing every kind of vegetable in abundance, the creeks fringed with alder, maple, laurel, and madrone combine to make an Eden.

The river had to be crossed by ford just before reaching upper Mattole and the water was so deep that the carburetor filled with water, the engine stalled and the auto had to be pulled out by a team of horses. About four miles above upper Mattole the road again crossed the river which had to be forded. The routing of the



LOVELY MATTOLE

Valley of the Crystal Water, with Petrolia Village nestling on its river bench lands.

road has been changed so that the south bank of the Mattole is used and these two useless fords are avoided. Just before crossing the river where the upper north fork runs into the main Mattole, we stopped for the night with one of the Etter boys. Here the deepest oil well, the Hoagland, going down 2,100 feet was bored in 1901, with only a little oil resulting. New brake bands, put on at Eureka, were burned to a crisp and worn out by the incessant use on down grades, and they had to be replaced.

The next morning another ford of the Mattole was crossed and here we broke the differential gear on account of the large boulders in the bed of the ford. The automobile kept on running and concluded the rest of the trip over 120 miles with a broken differential gear. Immediately on crossing the ford a useless climb up one of the steepest grades I ever saw had to be made. Back and forth the road weaved across the face of the hill and in one place at one time a fir tree in falling lay across the road five times. No hearsay about this road story. It is a sober fact that five parts of the road lie one above the other to gain an elevation of 150 feet. At the crest of this hill the road leads immediately down by the same winding, tortuous roadway just as steep to cross Honey Dew Creek.

By this time you cease to be exasperated by the route the road takes, up and down hill, but now begins a climb which discounts all other grades in the country. Wilder Ridge must be ascended and in about two miles an elevation of 2,500 feet is attained. The road passes through timber and chaparral. At the brow of Wilder Ridge the timber ceases and you emerge upon an open prairie. A prairie in Humboldt means an open grass plot among the timber and it is found on the tops of the hills and is usually rolling.

An eastern gentleman, wandering in Humboldt, was told to follow the trail until he came to a prairie, and then take the trail leading south. He lost his way, not in the prairie, but in the forest beyond. Meeting a traveler he was informed that he had passed directly through the prairie whereupon he exclaimed, "A California prairie indeed, a great big prairie as large as a four bit piece."

The road then traverses Wilder Ridge in a course a little east of south, for six or eight miles, descending the hill by numerous turns and windings, and then, just for the fun of the thing, ascends

another hill. Looking to the left and east, as you pass, the numerous prairies three miles away on the slopes across Mattole River look very inviting.

To the west the hills are steep, jagged and forbidding. The largest prominence is King's Peak which lies back from the road about two miles and is about the only mountain looking mountain in Humboldt County. Its sides are rough and steep, covered with chaparral and white thorn, with some forest on its northern slope. A small clump of magnificent sugar pine is found near the top of the peak, and is the only instance of the occurrence of this species of tree west of the eastern line of Humboldt County.

King's Peak is a fault block, from which the Wilder Ridge section to the east has dropped to a lower elevation. Honey Dew Creek flows along the foot of this fault. Evidently it has been above the sea much longer than the surrounding land. The waves formed terraces completely around the mountain at about the 2,800 foot level. As King's Peak is 4,269 feet in elevation, at one time it must have been an island 1,500 feet high out in the ocean.

The road manages to keep to the top of Wilder Ridge passing through some good tan bark forest until it begins to descend a long grade to cross the Mattole River at the mouth of the west fork or Briceland Creek. Here the opposite bank of the ford was so abrupt and sandy that the auto could not climb out and the assistance of a team of horses had to be secured.

The roads of Humboldt sometimes exasperate the traveler, but they are much better now than they were five years ago, as constant improvement work has been done. The road engineers often laid out the roads poorly but they had to cross the high Wilder Ridge because of the narrow, deep canyon that Mattole River flows through for twenty-five miles. Besides they worked when money was scarce and the population scanty.

Leaving the Mattole River, another ridge is ascended for three miles in an easterly direction, and then down grade where it is joined by the Shelter Cove Road, leading west ten miles to the ocean. We were now on the turn of the circle and headed east. Four miles through a scantily timbered country brought us to Briceland, a small town of about 200 people engaged in stock raising

and gathering of tan bark. An extract plant is located here. The hotel and a few houses of the town are lighted by natural gas which flows under strong pressure from an old oil well bored to the depth of 780 feet without securing oil in paying quantities. A well five miles southeast of Garberville struck solid granite at 503 feet, but the prospectors kept on through a strata which was never known to bear oil until a depth of 2,100 feet was reached. The oil seepages are very strong around Briceland, the oil sands are often exposed in the creek beds, and in all probability if there is any commercially profitable field in Humboldt the oil pool will some day be discovered in this section.

We stopped over night at Briceland and the next morning began an eleven mile descent to Garberville. The old river valley of the south fork of Eel River, five miles wide, six hundred feet above the present valley, can be easily seen and traced. Garberville is a small town of 250 population located on a bench on the east bank of the south fork of Eel River.

Here the road turns north and three miles beyond the town, enters the magnificent redwood forest, now ascending slight grades, now on level stretches, with glimpses of forest, stream and river bar at almost every point. Several ranches lie along the river's course and twenty miles from Garberville we are ferried across the river to Dyerville where the main Eel River is reached.

The rest of the journey is made by the road along the west bank of Eel River to Eureka already described under the chapter of "Around the Block." The road from Garberville is the official "State Highway," and is now greatly improved and furnishes one of the most delightful trips to the tourist entering Humboldt overland from San Francisco.

CHAPTER XVIII

SHELTER COVE



ABOUT the wildest and most precipitous land in Humboldt County is found in the Cooskie Mountains, which lie in the southwestern part between Mattole Valley and the Pacific Ocean. It is northernmost of the three ranges lying along the ocean counting from Shelter Cove on the south. It terminates in Point Gorda, a bold headland, about three miles south of the mouth of Mattole River. As the Cooskie reaches an elevation in the higher peaks of 3,500 feet and is only five miles across the base, and borders the sea, the range appears much higher than it really is.

On the ocean side the mountains rise at an angle of seventy degrees from an enormous depth of the sea, and these precipitous hillsides are bare of trees except in the gulches. Six short streams two or three miles in length, debouch down the sides, and laden with rock and silt have built little alluvial cones and beaches at their mouths. In a very few places narrow grassy flats lie between the foot of the bluffs and the sand, but in others the breakers come up to the very foot of the sloping grassy bluffs and hills. On the Mattole side near Petrolia, the Cooskie is mostly grazing land with timbered bluffs. The forest trees and open glades give the whole aspect of the country a park-like appearance. As one looks further south, the range appears to be one unbroken forest as far as the eye can reach. Such it is, a magnificent growth of fir and tan oak constitutes the best virgin stand of tan bark forest yet untouched by the bark gatherer.

Leaving the ranch of W. H. T. Hadley, than which there is no finer in the Mattole Valley, with abundant level land, fine soil and a perfect climate, we take the trail leading up the east slope of the Cooskie with the watershed of Squaw Creek below us. One

winds round and round and back and forth through the fine forests of fir and oak, coming sometimes upon grassy spots; down the slopes of unnamed small creeks, winding round and round up from the creek through the timber for several miles until you almost reach the top of the ridge.

In almost every direction there are hills, golden grassy hills, dark blue timbered hills, gulches and deep ravines. Towards the south is the highest peak in all southern Humboldt; higher than any peak that slopes right up from the sea, King's Peak, which gives its names to the mountains just south, and forms a continuous range with Cooskie.

On the ridge, the soil is thin and gravelly and on every side are evidences in form of strata, shells and water worn stones that the land has been under the ocean surface. These mountains were made almost by gradual pressure, just as you would wrinkle up a piece of cloth by pressing the two sides of it and pushing your hands together. A great deal of the topography of this section, however, was caused by faulting. Moody Ridge, to the east is a fault block, the line of the fault is occupied by Squaw Creek. The strata has been shaken by earthquakes. There are traces in the forest growth to show that a severe earthquake shook this country some 170 years ago. A large percentage of the ancient fir trees from 300 to 500 years of age have about one-third of the top broken off. Nearly all of the remainder of this older growth lean and are twisted out of plumb, while the younger growth from 120 to 170 years of age and under are almost as straight as an arrow. All through the mountains here on this coast divide, there is plain evidence of numerous landslides, which have slipped from the mountain sides into the gulches and canyons below. The trees on the older slides are not over 150 to 170 years old, but they vary in size from fifteen inches to five feet in diameter according to the location.

During the earthquake of 1906, this country was heavily shaken up. It marks the northern course of the fault rift. Numerous benches, covering twenty acres of level land high up on the side of King's Peak Range and which formerly gave fine grazing grounds for cattle and sheep, were so cut up by landslides, that their usefulness was almost destroyed. Three or four acres in a body and

practically inaccessible on account of the ravines left by the slides, are not worth much to the cattle industry. But the earthquake of 1906 was a baby when compared to the quake that happened 175 years ago, for it needs no imagination to tell us that the roar of an earthquake strong enough to snap the tops off Oregon pine trees must have been terrific. There are evidences to show that the Indian inhabitants of the country were numerous and were frightened away by this disturbance.

The Cooskie and King's Peak country is alive with game and wild animals. Deer are plentiful as there is so much rough mountainous country, and so much timber, producing acorns, on which they feed. Here are the bear gardens of Humboldt. So much of the coast range country is so rough that in some places it takes a bear to climb through it, and as long as the bears stay here, they are not likely to be molested. As the mainstay of their rations is berries, wild pea vines and acorns and an occasional good feed of salmon in winter, they do little damage.

The panther and wildcat are numerous and kill great numbers of the deer and also domestic animals such as hogs and sheep. Other wild animals of this section are coyotes, foxes, coons, skunks and otter. Among the birds are the grouse, valley quail and mountain quail.

The trail follows the top of the ridge for several miles, passing from the Cooskie Mountains to the King's Peak Range and then begins to drop rapidly down towards the ocean. It then follows the beach crossing several small streams which tumble down from the mountain heights. Along about evening we reached Big Flats, the site of the coast ranch of W. T. S. Hadley.

A large area of level land, as its name indicates, comprising perhaps 200 acres, with excellent range land on the adjacent mountain slopes makes one of the best stock ranches to be found in Humboldt County. It is practically the only place on the Humboldt coast that faces south upon the ocean, for the coast line runs almost east and west at this point. The high shoulders of Hadley and Shubrick Peaks lie to the north and shut off the prevailing northwest winds. It is a known fact that air as it descends mountains increases in temperature on account of compression and with the combination

of two factors of shelter and warm descending air currents Big Flat, with the exception of heavier rains, enjoys a climate similar to Santa Barbara.

A beautiful view of the ocean, the sharp contrast between the country through which we had to travel, and the seemingly wide expanse of its flat, the numerous cattle grazing on the rich rank grass, the hillsides dotted here and there by trees, as in a park, make Big Flat a charming spot. The inaccessibility of the ranch is a great drawback, but as an objective point for a summer outing it cannot be surpassed.

From Hadley's to Shelter Cove, about sixteen miles distant, the journey is made by the ocean beach. In only one place do the rocks offer a difficulty in getting around Point Delgada. Shelter Cove is a crescent shaped bay protected from the northwest and prevailing winds by the hills which terminate in Point Delgada. It is a natural open port, easy of access and vessels often lay in at time of heavy northers. The surrounding hills are not so precipitous as the country to the north, and fall back about three miles from the coast, are semi-circular in form and make an amphitheater with a little mesa on the beach as the stage. There are about 3,000 acres of open grassy land in the ranch, of which a little less than 800 acres could be plowed and cropped, if the country were more thickly settled.

A mesa about thirty feet above tide water borders immediately upon the beach and about 300 acres of flat rich land, the greater part of which is used for dairy, and is cultivated. Back of this level land, gentle side hills rise to another terrace evidently an old sea beach, and on this are about 200 acres of level ground in natural grasses, which are green all the year round. Back of this, rising higher and more abrupt, the grassy hills ascend to a semi-circular form, till the timber and chaparral lined summits of the high ridges are reached. It is five miles from the wharf by the wagon road to the top of the hills, which reach an elevation of 3,000 feet, and this road forms the only outlet for a large section of country in southwestern Humboldt and is heavily traveled.

Shelter Cove is an important shipping point and considerably over \$100,000 worth of tan bark and extract are shipped out each year. A cord of bark weighs about 2,550 pounds and by extracting

the tannin until it has a consistency similar to molasses a reduction of bulk is secured and the weight is brought down to about 700 pounds. An extract plant is located at Briceland about twenty miles inland. From 4,000 to 8,000 cords of bark are shipped in bulk in addition to the extract.

A regular line of steamers each week run from San Francisco and three other steamship companies make the trip as often as business will justify. An enormous amount of supplies for the ranchers, bark camps and small towns of southern Humboldt is shipped in through the Cove.

All over the ranch from the beach to the top of the first range of hills, the black earth and shell mounds indicate the homesites of the aborigines. For the Indian, the Shelter Cove country was a paradise. The number and extent of the kitchen middens, built up from years of feasting on the shell fish indicate a very large population at some time in its history. This place at the present time is noted for its shell fish. I never shall forget the dinner of abalone served at the hotel. All you could eat of the delicious tender white meat. The abalone are gathered only on certain days at low tide. A stick to put between the mussel and the rock is a necessary implement, for once clamped to the rock, the abalone exerts a powerful suction and cannot be dislodged. The meat is dark and looks like sole leather and must be severely beaten before it becomes tender and good to eat. The beautiful tints of the shell are known to everyone. The shell is often ten inches to a foot in length and there are multitudes of the abalone on the rocks, as this section has never been visited by the professional hunter. Periwinkles and mussels can be gathered by the bushel, and game fish of every kind abound in the waters off shore. About the most interesting of the sea products is the rock oyster. The oyster or clam when very small, lodges in a crevice in the solid rock and has a secretion which dissolves the stone as it grows larger. Here it lives imbedded in hard rock, with an orifice the size of a lead pencil and an inch long, through which it feeds. A sledge hammer has to be used to get the mussel out of its cell, which is carved out exactly to fit the growing form. They are accessible only at a very low stage of the tide.

The delicate tinted sea moss, the shells and agates along the beach, the fine fishing and other interesting points about Shelter Cove, the excellent deer hunting that may be obtained five miles away, will attract the tourist. In fact, a carefully guarded secret of abundance of wild game is kept by a few San Francisco sportsmen. For \$10 and eighteen hours' torture on a small schooner, the wonderful hunting on Chemise Mountain and King's Peak is open to the people of San Francisco Bay section.

The sea breaks with awful force upon rocks north of the harbor and has played some singular freakish tricks. In many places it has cut under-ground chambers. When the surf comes rushing in, the angry, boiling and foaming waters may be heard roaring and bellowing through these salty caverns with sullen sounds, while the ground quakes with force of the suddenly checked breakers. The caves have not been fully explored and no doubt they form an additional attraction to an already attractive spot. The mouth of one cave is low and some distance back from the shore line a round chimney or air hole for the cavern has been formed. When the waters recede the cave is filled with air, and as the breakers come tumbling in, they completely cover the entrance and filling the caves with a rush of water of incalculable power, drive the atmosphere and spray through the vent with geyser-like force.

The scenery is all to the south. To the north the view is cut off, but on clear days the Mendocino Coast, discovering Bear Harbor, Kibbesillah, Bedate, Fort Bragg, Point Canrillo, Cuffey's Cove and at times the beacon light of Point Arena, can be seen.

The strong trade winds blow at some time during the day, sometimes there is fog, but in summer, it is a place well worth visiting.

As one passes over Humboldt County, the intuitive good judgment of the ancient Indian inhabitants is confirmed. Wherever nature has endowed a spot with more than usual beauty and merit, the numerous shell mounds and rancheria grounds will testify to their former presence. The lover of scenery, of hunting, of fishing, of the sea, can spend dreamy vacation hours full of rest and refreshment, in the hill encircled amphitheater of Shelter Cove.

CHAPTER XIX

TRINIDAD AND PATRICK'S POINT



E now turn to the section of Humboldt County north of Humboldt Bay. The coast of Humboldt is usually smooth in outline, made up of sandy beaches or else the hills rise directly from the water's edge.

Except for a few rocks near Cape Mendocino, the only broken littoral is about thirty miles north of Humboldt Bay, where for a distance of nine miles off Little River Beach, Trinidad Head and Patrick's Point, the eternal conflict between sea and land has been waged. Here is Humboldt's rock bound coast, where nature threw one of her land points far out into the Pacific. Wherever the defenses of the land were softer in structure, there have the powerful waves of the ocean eaten far inland and conquered. The wrecks of the outposts are still to be seen in the thousands of islands. North of Little River the black rocks still thrust their heads above the waters which beat upon their scarred and riven sides.

A dream of rugged coast has here come true. In all the world, there is no superior marine view than that seen along the river from Trinidad to Patrick's Point. There are many days when it is cold and foggy, when the rain beats steadily, when the wind blows with hurricane force. These are the contrasts by which the beautiful picture is all the more appreciated, when the white foam rides the gentle breakers as they lap the shore with whispering caresses, when the jagged rocks form black masses in the silver sheen, as the sunlight dances on the ripples. The long glittering stretches of sand, the clear sparkling river flowing from green and lofty mountains, the rolling waves and foaming breakers, make the beach at Little River a favorite camping ground.

Trinidad may be reached by the railroad in an hour over a thirty mile trip from Eureka, or by automobile on the excellent county road which becomes a part of the new state highway.

We take the road around the bay and passing Arcata, we drive through the prosperous farming section of Mad River bottom, and the little settlement at Alliance.

Three miles beyond Arcata, Mad River is crossed by a covered bridge which completely shuts off all view. The road now turns west along the higher terraces of Mad River for three miles, giving a fine view of the bottom lands on the left and the timber hills on the other hand.

Now the road runs directly north along a section line on level land known as Dow's Prairie. Here are several thousand acres of high prairie not fully developed, adapted to general farming. In addition there is much stump land which can be made ready for the plow by clearing. We cross the Dolbeer and Carson's Railroad and pass through McKinleyville, a small settlement. The road is remarkable among the Humboldt highways. Here is the longest stretch in a straight line to be found in the county, and the distance is two miles and a half. After a short jog a mile north of McKinleyville the road runs in an almost straight line northwesterly for four miles. To the west is one of the prettiest groves of trees, pines, firs and cedars, the latter being perfectly symmetrical trees. The fences are a high growth of fern and underbrush. Soon we reach a down grade, which leads to Little River. At the turn the wonderful panorama of Trinidad Bay is to be seen. Heading out to sea, the black mass of Trinidad Bay is to be seen. Like a giant whale, it plunges its nose, 300 feet high, into the waters of the Pacific and completes the crescent of the bay. Scattered in the foreground by the lavish hand of nature are the black jagged rocks, islands and promontories, with placid coves, romantic capes and golden beaches in between.

When the wind howls around the head, the majestic power of the Pacific is loosed. Long rows of combers, as many as sixteen at a time, roll in processionally with resounding crashes and thundings against the rocky shore. The dashing waves hurl high their spray against the larger islands. With the backward surge, the cascades fleck white the black rocks, as the spray falls off their seamed sides. The breakers roll in masses of foam over the smaller islets, and the angry spots of whirlpool and seething waters show

where the hidden, almost conquered rocks lie just beneath, offering their last resistance to the ocean's swell.

Crossing Little River, we drive for two miles on a smooth and solid beach. The old workings of the gold bearing sands have thrown up dunes and dug lagoons on which the wild ducks swim. Soon we climb out of Little River Valley to a plateau on which the little town of Luffenholtz stands. The country was burnt over by a brush fire some four years ago, and presents a blackened and charred appearance. In the logging operations of years ago, a great amount of down timber was left on the ground and the stumps were cut high. This with growth of brush and berry vines, made a roaring fire which burnt about ten square miles of the cut over land. All of this land is susceptible of cultivation, but first the old stumps will have to be blasted out and the land cleared.

We now descend by a steep grade to a little gulch, out of which we immediately climb. After a mile of road on comparatively level land but elevated 200 feet above the ocean, we reach the town of Trinidad.

It is a disconsolate remnant of what has been. During the boom days of 1851 and 1852, when the gold placer mines of the Trinity River were being operated, the city of Trinidad numbered a population of over 3,000 people and was the county seat of Klamath County. Two years more the population dwindled to zero, and remained at that figure until the logging operations in the 70's livened the ancient site with a population of half a thousand.

In 1912 it was discovered that the incorporation of 1852 had never been dissolved. Acting trustees were appointed by the Governor of California; an election was held and the population of one hundred keep up the city government of Trinidad. There are several hotels, which occasionally have a guest and really the magnificent marine view is justification for the existence of a resort city if Humboldt were more extensively advertised. The stores are all on the north side of the main street, which runs at the edge of the cliffs, at the foot of which the thundering breakers roar.

Trinidad Bay is an open roadstead with extremely deep water close in to the shore. It is of easy access from the sea at all times of

the year; and during the storms, the lee of Trinidad Head offers full protection. It would be easy to run a breakwater from Trinidad Head to Pilot Rock, 2,600 feet out in the Bay. Pilot Rock is no small affair, as it is more than 300 feet across the base and 112 feet above high water. It is diminutive beside Trinidad Head which is over 1,500 feet long and 383 feet high.

A few small rocks in the bay could be removed and a very good harbor could be made at Trinidad if commerce warranted the expenditure of a large sum of money. Humboldt County is prolific in schemes whereby fortunes will be made for the promoters, if outside capital would only do the work. The particular rainbow cherished by Trinidad, is that some day it will be made a harbor of refuge. The United States Board of Engineers has surveyed the project and it could be completed at an estimate expense of only seven million dollars (\$7,000,000.00).

The chances are extremely remote that any such work will be done, because the government has already spent \$4,000,000 on Humboldt Bay, where the greater part of the population is now and must live in the future. If \$7,000,000 more were spent on the entrance to Humboldt Bay, as good a harbor of refuge would be obtained and the demands of the commercial world could be met at the same time. Trinidad will probably become a more lively place as the county develops. There is a great deal of timber to the north which could be shipped from the port when once the logging operations commenced.

North of Trinidad the State Highway runs along a terrace so close to the ocean that an ever changing vista of sea, rocks, and rugged coast is presented at every point.

The soil is rich and black and the green fields of grain between the road and ocean give a foreground for the broad sweep of the Pacific to the horizon. From Humboldt to Japan there are no intervening islands and the breakers roaring at our feet may have swept across the sea without stop or hindrance. The geological formation is hard serpentine and diorite rocks with occasional rock stacks which have resisted the elements. It is an old marine terrace which has appeared above the ocean within a comparatively recent age of the world.

Three miles beyond Trinidad the road is surfaced with a gravel which is remarkable for its uniform size and roundness. It is thoroughly water worn and runs about the size of a pea. A gravel formation which is cut through by the right of way runs nearly a quarter of a mile on the surface of the ground parallel with the ocean, and is evidently an old stream bed.

In a little gulch, an Indian camp by the side of a stream was pitched. To see this scene carries one back to the time before the white men came, when the Indians held undisputed sway. Three little children were running about and the woman was cooking the meal. Down by the beach the men were catching surf fish and spreading them in rows on boards to dry.

There is peculiar charm in Humboldt scenes and the variety which Humboldt offers is truly amazing. Forest, mountain, lake and ocean, rivers and prairies, each is at hand and sometimes combinations of all will happen in favored spots. The sweet soft balmy atmosphere, the purity of the gurgling brooks, the soothing calm of solitude makes Humboldt a state by itself, not as southern or central California, nor like the states of the Pacific Northwest.

The browns of the more familiar parts of California, are lacking, nature is ever green in Humboldt. The rains of further north are wanting for seven months in the year; only occasional rains may come, yet sufficient moisture falls, so as to render irrigation unnecessary.

Cold weather and snow never come along the coast. If one yearns for them, a trip to the mountains in eastern Humboldt will satisfy the longing and soon send you back.

At Patrick's Point, the hard rock formation sinks beneath the ocean's level to reappear in Point St. George, sixty miles north. The rock stacks become numerous. Enormous boulders, some of them composed of copper ores lie upon the ground. At the water's edge the cliffs are shattered; the rocks lie scattered about in profusion covered with mussels.

To the north the crescent of the beaches extends along Big, Stone and Freshwater Lagoons, and the country north to the Klamath River, beyond the limits of Humboldt County.

CHAPTER XX

THE LAGOONS



ABOUT forty miles up the northern coast from Eureka, are three interesting and beautiful lakes. The ridges of the coast ranges run out towards the ocean, and nestling in the hollows of the hills are Big, Stone and Freshwater Lagoons. They are separated from the ocean by comparative narrow strips of sand and represent old bays which have been cut off by the sand spits, deposited by the ocean currents to form lagoons.

The largest and most southerly is Big Lagoon, which is right-triangular in form, fronting along the ocean three miles and separated from it by a strip of sand 300 feet wide. The greatest length of the lake is four miles and it has an area of about 2,500 acres. Big Lagoon varies in its water level, being about ten feet higher in January than in August. During the summer months, the water flowing into the lagoon from Maple and Pitcher Creeks, seeps out to the ocean through the sand. When the rainy season comes, the water piles up until the sand gives way at the southern end, so that during the winter, the tides ebb and flow through the entrance thus formed. In times of high tides or during the stormy weather the waves roll over the sand dunes and flow down into the lagoon, thus giving a brackish taste to its water. This sand spit makes a very good road at times and saves considerable distance, but on account of the danger of travelers being covered with the waves and the opening of a channel every winter, the State Highway pursues a tortuous way around the eastern edge of the lagoon giving an additional distance of eight miles. The pitch of the beach on the ocean side is rather steep and where the sand is dry, the traveling is very difficult. Of late years, hardly anyone attempts to cross on the beach, but all prefer to make the longer circuit of the lagoon, as the road is well graveled and in good condition.

People walking up or down the coast, of course, cut across following the shore, and the distance is covered in about one and one-half hour.

The sand spit carries a large value in gold, in the form of dust so fine that no practical, commercial method of recovering the gold has as yet been devised. It has been worked several times by companies with little profit, but it is estimated that there is at least ten million dollars to be recovered from Big Lagoon Beach. After storms when the waves roll in from the southwest, locally known as panning surfs, along the beach are found streaks of black sand, and washing it at leisure, very good wages can be obtained for the labor involved. A high content of platinum is also found and an enormous fortune awaits the inventor of a cheap method of working the sands.

On the south side, the lagoon is bordered by considerable lowlands which some day will be utilized for agriculture, although it is taken with fern at the present time. A few farms along the old road now are indifferently cultivated. The soil near the lagoon is about two feet deep, made up of rich black loam underlaid by sand. The result is that the surface dries out very rapidly and only certain crops can be raised on the land. Back a mile from the lagoon the soil is deeper and underlaid with rock formation. During the last three years a new road has been built which shortens the distance around the lagoon. It passes through a fine growth of redwood, following a small creek and finally comes out upon the lagoon about the center of the southern edge. The road then runs east until Maple Creek is reached where the lagoon heads, and then runs north. We pass by a hotel and drive two miles through swampy ground until we cross Pitcher Creek. Then the road begins to pass through the forest for three miles up and down hills. Finally we emerged from the timber onto open fern lands along the northern and eastern shore of the lagoon. The road now climbs an up grade which finally brings up to a bold point on the north end of Big Lagoon at an elevation of 600 feet above the sea. Here is the point of magnificent view. Naturally we are first attracted by the marine grandeur which lies spread before us.



UPPER MATTOLE

In the tangled manzanita and fastness of young fir, white deer lie hid, cool and comfortable in their coverts.

Strange as it may seem, this section of the Humboldt coast from Patrick's Point to Redwood Creek enjoys more sunshine and less fogs than any other portion, so most of the days are clear, sunshiny and beautiful in the extreme. The deep blue of the ocean's water fringed by the white of the surf, contrasts with the tawny yellow sands which keep placid the greenish blue waters of the lagoon. The eye instinctively follows the beach as it rounds into the hook formed by Patrick's Point to the south. Rising in terraces from the ocean, the ridge leads the eyes to the east, where the forested basin of Maple Creek lies spread out before one. It is hard to describe the color of a redwood forest. In the midday it seems a brown, at evening the purple shades are deep, in the morning the grays predominate, and at all times the greens of the needled branches form an underlying harmonious tone. Nature in Humboldt County clothes every foot in vegetation. Each rock has its lichens, moss or huckleberry. Every crevice its spear of grass or flowering plant, every hillside its covering of ferns, shrubs or forest. Along the roadsides are wild columbine. Here and there the saucy freckled tiger lily, nods its head through the fern bank. The fleur-de-lis, the violet, wild flowers without number, border the wayside. The thickets of salmonberry, thimbleberry and blackberry flower white in the early spring and fruit black, red and yellow in July. There is no dust and foliage is fresh and green throughout the year. The road through the redwood forest may sometimes become monotonous, but around the lagoons, the varying scenes are changed too often to become wearisome.

In the lurking dampness of the forest the rhododendron blooms. A perfect cedar will occasionally appear as one rounds a gulch to prove that symmetry and grace may exist along side the strength and majesty of the sequoia. Out from the cool dark shade of the forest we plunge into the warmth of the sun on the fern-clad hillside. The majesty of the restless ocean bursts again into our view and the charm of peace is revealed in the mirroring waters of the lagoons. Glorious vistas of sea, lagoon, mountain and forest charm the eyes on every foot of the sixteen miles of this road. This timber of Big Lagoon basin, comprising 11,000 acres of mature redwood, is all under one ownership and lies in a compact body on the water

sheds of Maple and Pitcher Creeks. All of the lagoons are teeming with fish and are the rendezvous of thousands of wild water fowl at certain seasons of the year.

Leaving Big Lagoon the road circles the hills at a great elevation above the sea, thundering upon the beach below. After a mile along the high terrace, we descend to what is locally known as Dry Lagoon, which as its name indicates was once a fourth lagoon, which had been completely filled with sand until the surface is elevated about three feet above the sea level, and is now in grass. The sand spit is there just as if a lagoon lay behind it, and it needs only a little imagination to picture the smooth waters of this fourth lagoon as they were a few hundred years ago. Beyond the bed of Dry Lagoon a hill rises, which becomes quite a ridge further north. At the west end of this hill is a remarkable conical shaped rock with a very sharp point which would attract attention anywhere. It is undoubtedly of igneous origin, filling the chimney of an old volcano. It is composed of rock so hard that it has successfully resisted the attacks of the waves when the coastal plains were formed and is now a rock stack, the solitary representative of another time.

The road runs for two miles through considerable level land, well cultivated and several Indians are seen working in the fields. We pass by a schoolhouse and arrive at Stone Lagoon. It has all the charms of the lakes of Killarney and needs only the advertising to become a first class watering place. Stone Lagoon is an elliptical shaped body of water about a mile and three quarters long by one-half a mile wide, lying with its long side parallel with the coast. A large hill separates the lake from the ocean, except at the extreme northwest end, where a sand spit intervenes. This hill is beautifully wooded with grassy spots scattered here and there, and it has all the charm of mountain scenery. On the east a high ridge nearly a 1,000 feet in elevation rises most abruptly from the water's edge. At the southeastern end of Stone Lagoon, the hills drop back about a quarter of a mile and leave considerable level ground, which is seeded to clover and used for a dairy and sheep ranch. The force of the west wind is broken by the high intervening hill and Stone Lagoon is usually a still, beautiful sheet of water lying like a mirror between two hills. Only at the times of the north-

west winds, to which Stone Lagoon lies open at the ocean end, does the lake become tempestuous. In fact, it is dangerous then to be rowing or sailing on account of the large waves which sweep from the northwest end to the southeast head of the lake.

Several small creeks drain into the Lagoon and the January level rises some twelve feet above the August level. This results in forming, during the summer months, a fine beach fringed by magnificent alder trees along the eastern edge, which is rocky in character. Ledges of twisted rocks run out into the lake, forming capes and promontories. The silver strands of little coves, between, furnish landing places for boats. The boating is unsurpassed on Stone Lagoon, both sail and row boats being used. Floating on the gently rippling surface, we may spend hours in happy contemplation and meditation. The lake is teeming with steelhead trout and other fish. Some record catches have been made. During the duck season, the water is oftentimes literally covered with them. Back in the hills ten miles to the east are found deer and wild game.

Across the lake are snug little sunshiny nooks, bold headlands, romantic capes and beautiful spots in unending variety. On the beach choice of fresh and salt water bathing is offered, for a run of one hundred feet will let you swim either in the surf of the ocean or in the quiet warm water of the lagoon. Numerous large black rocks along the shore to the south of the sand beach give opportunities for investigation of the sea life which clusters around them. A mussel bake can be obtained in a short time, and there are numerous small caves to be explored. The colors of the water vary as the point of view is changed. Beautiful iridescent green shades into azure blue. In the shade, purple shadows gather. Even in rainy weathers, Stone Lagoon is beautiful. For as the mists break away, the air is cleared; nature has been washed fresh and clean, and its charms are manifold.

Journeying reluctantly on, the road circles around Stone Lagoon, following the shore nearly a mile, and then begins to climb a low point over the divide to Freshwater. Along this upgrade, the best views of Stone Lagoon are to be obtained. After passing the top of the ridge a steep down grade is encountered, which leads down to Freshwater, about a mile and a quarter long by a quarter

of a mile wide. It is the last and smallest of the lagoons and by some people considered the prettiest. It is very similar to Stone Lagoon, occupying the cleft between two ridges, open to the ocean. Being the farthest north, hunters do not get to it in great numbers and at all times of the year it is the home of wild fowl.

Only a half a mile beyond Freshwater is the mouth of Redwood Creek, and the country of the lagoons comes to an end. They are three pearls in the crown of Humboldt's glories, and will become renowned in song and story as the population increases. Half the charms of the highlands of Scotland is found in the romance and historical deeds enacted on the shores of its lakes and on the height of its mountains.

The lagoons of Humboldt need only time and a Walter Scott to sing their praises to become famous throughout the world.

CHAPTER XXI

GOLD BLUFFS



JUST at the northwest corner of Humboldt County, is a small creek called Ossegon, which flows into the ocean at a point about six miles south of the mouth of Klamath River. For a distance of nine miles south of Ossegon, an almost unbroken line of vertical gravel cliffs from 100 to 500 feet high, forms an escarpment along the Pacific.

Years ago, the beach was narrow and steep, and the waves washed the base of these gold bearing cliffs at every high tide. At the present time this is only the case at the south end. Along the northern part of Gold Bluffs for a distance of three miles, sand has accumulated, and no doubt it is the detritus of Klamath River, making a beach from 200 to 800 feet wide. In addition a broad sand bar has been forming about a mile out from the shore, so that the force of the waves is diminished and only once in a while do they reach the base of the cliffs.

Every winter, after the heat of summer has cracked the earth, the soaking rains cause huge slabs of earth and gravel to cave and split off the perpendicular face of the bluff. The cakes of gravel become dissolved and are ground to pieces, and are cradled by the swirling motion of the waves. The gravel is carried out to sea, and the black sand which contains the gold, being heavier is deposited in streaks along the shore. Mining the deposits is carried on by collecting the black sand after the tide has gone out, and washing it in ordinary and patent toms. The gold is in a very finely divided state, and contrary to the commonly accepted opinion, nearly all is recovered in the processes. As a test a ton of tailings after all gold possible had been recovered, was sent to San Francisco for examination and not a trace of gold was found.

The gold deposits are not so very valuable. It is expensive to work and the gold is so fine that it will float on water when dry.

Every pan will show color but it is surprising how many pans it takes to make a cent's worth of this gold. It is chiefly to the imagination that Gold Bluffs appeal. The thought that the ocean has for ages been rolling and swashing this beach, like an immense pan in the hands of a skilful miner, washing off the gray sand and leaving the gold bearing concentrates, is entertaining to the minds of those who would like to go out with a scoop shovel and gather in at one fell swoop enough to last them a life time.

During the last few years, little mining has been done at Gold Bluffs, chiefly because it does not pay. The method pursued is to wait for a panning surf, which is one that comes in from the southwest and strikes the beach diagonally, washing away the gravel and leaving the black sand. If the surf hits the beach squarely it simply piles up a gravel deposit several feet deep. The beach sand is scooped up into little piles and mules are loaded with two sack fulls and they trot back to sluices. In places waves come up to the bluff and the mules when they see a wave coming, turn face to the bluff and take their drenching, then journey on. The black sand is stacked up until perhaps forty tons, representing the action of a particular tide have been accumulated; after which it is washed. The largest amount recovered in the best years was \$25,000 and a seven days run totaled \$1,600.00.

The chief interest of Gold Bluff in 1923 lies on two factors. First: How the deposits originated. Second: The great excitement caused by their discovery in 1851.

After the gold rushes of 1849 and 1850, most of California had been thoroughly explored, and the greater part of the placer deposits had been located and were being worked. The late comers and dissatisfied prospectors were ready to grasp at any rumor and the kingship of all rumors, great mining excitements and rushes, is acknowledged and awarded to Gold Bluffs. Reports diligently circulated by interested parties in the spring of 1851, stated that the sand of the ocean beach for miles south of the Klamath River were largely composed of gold.

A company of nineteen men had found the riches, but they were so amazed and lost in the midst of the surrounding treasure that

they did not know what to do. No man could carry more than seventy-five to one hundred pounds on his back for any distance, and with the extraordinary quantity of pure gold, it was ridiculous to be contented with a paltry hundred weight, when numberless tons lay about.

There seemed to be no doubt of this incalculably valuable deposit, since numerous samples of the wondrous black sand were exhibited. Golden particles, shining like stars of the heaven, and as innumerable, sparkled from the sand. No digging even was required since all one had to do was to stoop and gather up the half gold and half sand from the surface of the beach. And in fact, millions of diggers for ages to come could not exhaust the deposits. The papers were full of the news. The *Alta California*, a leading newspaper of the time says:

“The gold is mixed with the black sand in proportion of from ten cents to ten dollars to the pound. At times when the surf is high, the gold is not easily discovered, but in the spring of the year, after a succession of calms, the entire beach is covered with bright yellow gold. Mr. Collins, the secretary of the Pacific Mining Company, measured a patch of gold and sand and estimates it will yield each member of the company, the snug little sum of \$43,000,000.00; and the estimate is formed upon a calculation that the sands hold out to be one-tenth as rich as observation warrants them in supposing.”

The ancient excitement of the Mississippi Bubble and the South Sea Scheme was a mere bagatelle as compared with this in San Francisco, used as that city was to all rumors and yarns of gigantic pockets.

People raised all the money they could scrape to invest thousands of dollars in the shares or else sold and forsook all their property and set out for Gold Bluffs. The magic phrase of Gold Bluffs! *Gold Bluffs*, appeared in the papers among the shipping columns. In huge posters they covered the blank walls at the corners of the streets. The most apathetic were startled and the Golconda was in every man's mouth.

The owners of the claims organized a company, The Pacific Mining Company, with stock at \$100 per share, which soon com-

manded a substantial premium. The modest General John Wilson, president of the concern, substantiated the rumors because he had actually been on the ground and the retiring Mr. Collins saw a man who had accumulated 50,000 pounds or tons, he did not recollect which, of the richest kind of black sand.

Such intelligence astounded the community, and distant countries were fired with the news of the richest discovery ever made. Eight vessels made ready to sail, and the Pacific Mining Company outfitted a vessel, the "Chesapeake," at a cost of \$20,000 and made several trips. About 5,000 miners arrived upon the scene, but bad reports soon began to be received through letters and returning pilgrims. The gold was very fine and the black sand was hard to separate from the gray sand. Only certain tides cast up the gold and between times there was nothing to do but sit down and wait for another favorable tide. Ashamed of their hopes and credulity, the financially ruined miners returned to San Francisco, and cursed the cruel wags that now exhibited sealed phials of dingy sand largely mixed with brass filings. Much serious loss was suffered, and even the promoters who may have been sincere and mistaken men, reaped no reward. After several trips the "Chesapeake" was damaged in a storm and sold for \$2,000.

There was considerable gold at the Bluffs but it cost more than it was worth to gather. Hence the place was abandoned except by a few still hopeful individuals.

The second interesting point about Gold Bluffs is how they were formed. It has been clearly determined that the gold is derived from the bluffs which are composed principally of gravel. Beginning from the top a cross section shows deposits as follows: Loam, ten feet (attention is called to this depth of soil on top of a bluff 500 feet high, such soil is the usual rule in Humboldt) underlaid by twenty feet of yellow clay; coarse gravel 40 feet; sandstone of a brownish color 10 feet; red and yellow gravel 40 feet; blue colored sandstone with scattered pieces of wood, altered to lignite, 5 feet; coarse red and yellow gravel 55 feet; fine blue colored gravel 5 feet, indurated sand 15 feet; gravel deeply stained red 10 feet; blue sandstone with lignite 5 feet; without lignite 5 feet; and finally 7 feet of gravelly beach to the low water mark.

It is a deposit laid down by an ancient river, of which, either the Klamath or the Trinity are the modern representatives. The ancient channel has been traced from Gold Bluffs on the coast in a southeasterly direction, twenty-five miles parallel with the present Klamath River, to the Hupa Reservation. The deposit is exposed along Prairie Creek where the State Highway crosses it on a flat summit opposite Gold Bluff at an altitude of nearly 700 feet. Two trails to Pecwan and Klamath Bluffs cross the ancient channel and along the road from the Bald Hills to Martin's Ferry it can be distinctly made out. It continues along an even crest of an adjacent ridge, and is remarkably well preserved at an elevation of 3,000 feet on a flat topped mountain, between Pine Creek and Trinity River on the northwest part of the Hupa Reservation.

The government road to the north end of the reservation runs directly upon this old stream bed for nearly a mile. The gravel is well rounded and many pebbles are as large as four inches in diameter. The gravel rests on slates which form a prominent hill between Hoopa Valley and Klamath.

The old joins the present Trinity River, a few miles above its junction with the Klamath and a prospecting preliminary survey was once made which seemed to prove that the waters of Trinity River can be brought on to the whole line of this gravel field. The theory that the two rivers had separated and distinct channels in former times, at least as far as the present coast line, is supported by a marked line of gravel a few miles north of the present mouth of the Klamath River in Del Norte County. This extends inland and northward towards Klamath Lakes, in Oregon.

As against the theory, the ancient channels of the Klamath and Trinity Rivers are shown by terrace deposits, converged just as they do now, and the theory that Gold Bluffs were formed by the Klamath is held by most geologists. It does not make much difference which river did it, the deposit is there and has caused some little excitement.

From the heights of the road which follows the coast north of Ossegon Creek to the mouth of the Klamath, the yellow water of the river is easily differentiated from the blue of the sea, and the

sand bars forming now a mile out from Gold Bluffs are caused by the extensive debris of the hydraulicking operations carried on by the miners of the upper river. Here the eternal operations of erosion and deposition are being re-enacted, to later appear when a convulsion of nature lifts the bed of the present ocean above sea level and reveals another sand and gravel Gold Bluffs deposit.

CHAPTER XXII

KNEELAND PRAIRIE AND THE BALD HILLS



TWELVE miles east of Eureka, a continuous range of mountains attaining a general elevation of 2,600 feet acts as a background and skyline to the emerald setting of the city. On the slopes, the heavy growth of redwood forests forms a purple cloak. At the top of the ridge, which is not sharp but has a flat or rounded summit three miles wide, there is no timber, and that open space presented to the view from Eureka, is called Kneeland Prairie. In winter, the white shroud of snow sparkles in the sunshine or chills the breath of the winds. In summer it is mantled by vivid green.

North and south throughout Humboldt County, just back of the redwood belt, the higher hills are bare of timber, and early received the general name of Bald Hills. These are covered with a luxuriant growth of native grasses, and are generally adapted to farming and could be used for growing fruit. The section is blessed with a rich soil, with plenty of timber and water, and is capable of sustaining a heavy population. But until the coast and bay section quadruples its population, thus forming a market and creating a demand for the products, the profit for the producer will be so small that little farming will be carried on.

In general the Bald Hills are along the eastern slope of Redwood Creek, which runs for its entire length of sixty-five miles within the limits of Humboldt County, and on both sides of Mad River towards its headwaters. As the present wagon roads only run up to the stock ranches of the Bald Hills section from the nearest trading centers, a trip through this part of Humboldt must be made on foot or by horse along the numerous trails which follow the summit of the ridges.

From Eureka, a very fine road leads by Freshwater Corners, through Garfield or Wrangletown, up the north slope of the basin

of Freshwater Creek, through the redwood timber to Kneeland Prairie. The drive in the cool of the morning out Myrtle Avenue, down Ryan's Slough Hill, across the bottom lands, over the smooth crushed rock surface of the Arcata road as far as Freshwater school-house is a delightful one. The clover fields, the apple orchards, the peaceful smiling farms, hedged with Azaleas in full bloom, the warm spring sunshine, the magnificent timbered hills, put vigor in one's veins and youth in the heart. The redwood country is the coolest, most pleasant place in the world to travel through. There is always a lush growth of underbrush, a seemingly endless variety of vine and shrubs to relieve the eye after it tires of scanning the majestic columns of the trees, which rise in serried ranks around and before the traveler.

As we rise higher in elevation, the timber becomes less dense, with a larger percentage of fir. Here and there the rhododendron flames its scarlet blossoms. The whirr of a grouse or the whistle of a buck breaks the silence of the forest.

Soon we pass Dome Shingle Mills and cross under the lines of the North Mountain Power Company, transmitting the energy and power of the streams of Trinity County to the coast. A drive of about fifteen miles brings one out of the redwood belt, and a nearly level road leads over Kneeland Prairie.

This extensive and fertile tract of nearly 5,000 acres would hardly be called a prairie in Kansas or Nebraska, being rather a succession of rolling hills. In former times it was used for grazing purposes but now the principal crops, wheat and oats, yield handsome returns. The view to the west where the ocean and bay ought to be, is usually obscured by a haze which hangs at an elevation of 2,000 feet.

The postoffice is located at the forks of the road, one leading east to Mad River and the eastern side of Iaqua Buttes, while the main road runs south to Bridgeville. Soon after leaving Kneeland post-office, the road drops down into a deep gulch to Lawrence Creek, a fine stream with its source in the Iaqua Buttes to the eastward. It is a tributary of Yager Creek and a portion of the Eel River system.

A steep grade up to Iaqua Prairie must be climbed, and a country of the same general appearance and elevation as Kneeland Prairie

is reached. A wonderful panorama of Eel River Valley can be seen on clear days from this point. In the immediate foreground, the country nearly all is grass land, lying on the north branch of Yager Creek. Beyond and at lower elevations are the timbered spurs and gorges of the innumerable tributaries of Van Duzen River. The divide between Lawrence Creek and the north fork of Elk River, which flows into Humboldt Bay is very low, so much so that Lawrence Creek appears to be a branch of Elk River. As the water supply of Eureka is obtained from Elk River it would be easy to turn the waters of Lawrence Creek by carrying it across this low divide.

It is hard to distinguish the dairy lands of lower Eel River on account of the mist, but the ridges of the divide on the west side of the basin can be seen, such as Bear River Ridge, culminating in Mt. Pierce with Rainbow Ridge indistinctly to the south. When the fog comes stealing in from the Pacific it spreads out like a vast billowy sea, filling the lowlands with an ocean of silver. From Iaqua, the overland road winds its crooked, wearisome length for six or seven miles down to a bridge across North Yager, then winds its eternally crooked way up the tedious hill beyond, makes a long detour around the head of another branch of the same stream, and finally descends to South Yager Creek at Yager postoffice.

This road is the shortest route leading from Eureka to Bridgeville, but the travel is very slight on account of the enormous and many repeated grades. Yet Humboldt County went into debt many thousands of dollars to build this road over which perhaps one wagon is driven each week, and which serves not more than ten sheep ranches. Another climb leads to the top of a grade from which a great many grassy cattle and sheep ranges of the eastern portion of Humboldt County can be viewed.

The bare knobs, Bald Jesse, Showers Pass, Larabee Buttes, and far away Lasseck's Peak, rising to an elevation of 5,875 feet, are prominent points. To the east, the long even crest of South Fork mountain touches the horizon, forming the divide between Mad and Trinity Rivers and stretches far away southeasterly into Trinity County.

It is seven miles more to Bridgeville on the Van Duzen, where four roads meet. Crossing the bridge, the eastern road begins a steep ascent through an open range country, broken by patches of timber. After ten miles a descent is made to the river near its juncture with the South Fork or Little Van Duzen, where the road is almost level for three miles on the valley floor until Dinsmore's ranch is reached. This is a favorite stopping point for automobiles and stages running to Red Bluff.

Three miles beyond is the county line and the low gap of Mad River. By what is known as stream capture, Van Duzen River has stolen a former tributary of Mad River by cutting back its head until the other stream is tapped and the waters diverted. The road runs up the old stream bed over a low divide between the two rivers, which are not a mile apart, and we reach Mad River where the new Trinity State Highway begins.

Mad River heads in Trinity County on a dividing ridge which separates the sources of the south fork of Trinity River; south fork of Cottonwood Creek, a tributary of the Sacramento; Redbank Creek, and the upper headwaters of the north fork of Eel River. Mad River occupies a narrow trough between the Coast Ranges, not much over five miles across, and for long distances the watershed is not more than two miles wide. On the south side of its basin for its entire length it has no tributaries, save a few small springs issuing out of the hillsides.

A dim trail leads down from the Low Gap until Pilot Creek is reached. This is the first tributary more than two miles long of Mad River from its source for fifty miles down stream. The narrow valley of this river naturally brings up the question of why it is so small and I believe that there we have the geological evidence of a great faulting or fracture of the earth's crust. South Fork Mountain and Mason's Ridge represent the high eastern wall at approximately 6,000 feet elevation, and the Kneeland Prairie, Iaqua Butte, Showers Pass, Larribee Buttes and Lasseck's Peak country represents the lower section, which dropped down. The rift valley, which would be formed, is occupied by Mad River.

The trail crosses Pilot Creek and ascends to the top of Mason's Ridge, which becomes the divide between Redwood Creek and Mad

River. All of the tributaries of Mad River flow in from the eastern side, and downstream are in the following order: After Pilot, come Coyote, Deer, and Bug Creeks with four or five other small streams in a distance of twenty miles. The whole watershed consisting of about one-half fine grazing land, the balance timber and chaparral.

Passing between Chaparral Mountain on the west and Mount Andy on the east, the trail reaches Snow Camp at an elevation of 4,580 feet above sea level. A few miles on, the electric power line is reached. A good trail runs east and west along the right of way of the power line across Humboldt County, far better than the trail on which we continue northwest along the top of Mason's Ridge six miles to Murphy's. The watershed of Boulder Creek, eight miles long, with an area of sixteen square miles lies below, draining into Mad River. To the east is the source of Redwood Creek.

Three miles below Boulder Creek, the next tributary to Mad River is Maple Creek, five miles long with a watershed of ten square miles, one-half of which is covered with scrubby fir. The trail now leads down from Murphy's to the main road and seven miles on, we cross Canyon Creek. Its watershed comprises forty square miles, twenty of which is covered with magnificent redwood timber. The remainder is fine farming and grazing land.

About six miles beyond, the north fork of Mad River puts into the main stream near the towns of Blue Lake and Korbelt. Its basin embraces about sixty square miles, on which is first class redwood timber, with the exception of 1,000 acres of farming land. Korbelt is a mill town, where the Northern Redwood Lumber Company's plant is located. An excellent hotel, stores and perhaps sixty houses make up the town.

Blue Lake, with about 400 population, is located a mile down the river, and is the place of residence of a great many of the laborers in the Korbelt Mill. It has considerable farming land surrounding it.

A narrow gauge railroad runs from Korbelt, through Blue Lake and Essex twelve miles to Arcata. At Essex, the last tributary of Mad River joins the stream. Lindsay Creek flows entirely through redwood timber, is about eight miles long and drains an area of thirty-two square miles. The standard gauge railroad from Arcata

to Trinidad also passes through Essex and runs up Lindsay Creek through the enterprising little town of Fieldbrook.

From Korbel, the road to Hupa Valley in Northeastern Humboldt climbs up the flank of Liscom Hill to Bald Mountain or Acorn Postoffice, then north along Mason's Ridge to the forks where the road to Bair's Ranch joins the main Willow Creek Road. Thence it is down hill to Berry's on Mad River, then up a stiff grade to the summit, of Horse Mountain ridge at an elevation of 3715 feet or a rise of over 3,000 feet in three miles.

To the northwest stretches the grazing lands for thirty miles. We have passed through the Bald Hills. The finest of stock ranches occupy their slopes, another invaluable and inexhaustible resource of Humboldt County.

The road then follows a spur range leading down to Willow Creek fifteen miles through scattering timber to the Trinity River. Willow Creek hotel is prettily located, picturesque and restful. The road to the Hupa Reservation follows down the Trinity six miles through some of the finest orchards in Humboldt County. Mining is indifferently carried on along the stream at China and Clover Flats. Two miles below we come to the land of the Indians.



I will lift up mine eyes unto the hills, whence cometh my inspiration.

CHAPTER XXIII

“THE HUPA”



BEAUTIFUL little valley, in the northeastern part of Humboldt, along the lower stretches of Trinity River has been set aside as a reservation for the Hupa Indians. There are altogether about 1,200 acres of tillable land, surrounded on all sides by the mountains of the Coast Ranges, which stretch away in primitive grandeur, and make a natural game preserve of hundreds of square miles, into which hunters from the outside are practically forbidden to go by the deep snows in the winter and the inaccessibility of the country at all times. On the west the Hoopa Mountains, the divide between Trinity River and Redwood Creek is about 4,000 feet high, and to reach the reservation it is necessary to leave the railroad at Korbelt and take conveyance, which climbs over the Bald Mountains down into the canyon to Redwood Creek and then crosses this high range. On the Redwood Creek side, the ridge is open and makes good grazing land, but crossing the divide, it is heavily wooded. The Indian school and reservation headquarters lie close to the foothills about the center of the level land, with live oaks and madrones standing here and there, singly and in groups, facing the east.

The eastern side of the valley is steep and culminates in a horse-shoe shaped mountain called the Trinity Summit, which in winter time is covered with deep snows. Three large creeks, fed by this snow, alive with trout, pour their clear torrents into the Trinity River as it flows through the valley. The southern is called Tish-tang-a-tang Creek, is most wild and picturesque, with a number of waterfalls, some of which descend 200 feet in a perfect sheet of water, with a roar that can be heard for miles. The second is Hostler Creek, and the third is Mill Creek. These divide the eastern valley into three triangular shaped masses 1,500 feet high as steep

as soil can cling to the mountain side backed by the high ranges to the east which reach an elevation of 6,500 feet.

There are also three creeks, Campbell, Supply and Socktish, of nearly equal volume, which flow from the hills on the west. These furnish plenty of water for irrigation and other purposes.

At the northern end of the valley is a grass covered slope gradually rising to the height of 1,900 feet, which shuts in the valley and forces the Trinity to turn eastward and pass six miles through a wild steep canyon to its juncture with the Klamath. At the southern end another hill of equal height blocks the valley, and the Trinity has carved out from the side of this hill, a beautiful little valley which from its shape is called the "Sugar Bowl."

So the Hupa Valley proper is small, extending along the river about six miles and nowhere is it more than two miles wide, while the Hupa Reservation is twelve miles square, and begins at the mouth of the Trinity near Weitchpec and runs back to the mouth of Tish-tang-a-tang Creek, with six miles of rough country on each side of the river. It was the original home of the Hupa, although their influence extended up to the South Fork.

The present population is an interesting remnant of what was once a numerous people. At the close of the Indian Wars in 1864, during which many of the Hupa perished, there were 650 people in the valley. The present population is now about 500, of which one-fourth are of mixed white and Indian blood. They had neighbors on the Klamath, the Yurok and Karok tribes, with whom they carried on trade, attended the other's dances and intermarried. In fact, all the Humboldt Indians are of the same racial stock, the great Athapascan Tribe; and their languages are related.

At the present time the Indians have for the greater part adopted civilized dress, attended school, taken allotments and become farmers, and are as trustworthy as the average human being. We are principally interested in their form of living previous to reservation life, and as the old customs are still practiced to a great extent, we can gain a clear picture of their daily life in the savage state.

The keynote of the Hupa's thought and action is found in religion. He has reverence highly developed. It is bad to step out of

the trails, they were placed there for good reasons, and at convenient spots there are resting places where a prayer is offered. They considered the Dawn a maiden who, seeing the early riser says, "I like that man, I hope he lives to be old. He always looks at me." This induces early rising on the part of the men, and as their custom requires the women to be up before the men were astir, the rancheria was awake early.

The older people persevere with pious tenacity in the religious superstitions of their forefathers. They have no distinct idea of immortality and believe that their religious ceremonies were established by a man, whose Indian name signifies "One who is lost across the ocean," or "Old man over across." He was born near Martin's Ferry and going up and down the river, he set affairs right. As their folk stories vary considerably with the relator, the myths are vague and often contradictory.

Pain was looked upon as a substance lodged in the body which must be removed, an internal fight as the words of the following diseases show:

A Cold—"His head its fluid fights with him."

Cold on Lungs—"His Phlegm fights with him."

Feet Swollen—"His feet something fights with it."

Heart Trouble—"His Heart Something Eats."

Lame Back—"Flint fights with him."

Pneumonia—"Kilwe (little man) fight with him."

To dispose of this substance, a sect of doctors arose, who by eating sparingly and according to certain rules and after a long period of instruction and probation were allowed to practice, always however, upon the prepayment of a fee. The cures consisted mainly of formulas which were accounts of former cures and the words by which the cures were made.

The Hupa believes earnestly in the power of words, far stronger than herbs or dances, was the formula. An instance of this word reverence is found that they will never mention the name of a dead person. Instead they use a phrase. It is related that the words of the language were once so tied up on account of numerous deaths

that the custom was suspended and a fresh start made. The younger generation were forgetting the former short terms and were using the long phrases as the natural words.

The daily life of the aborigine was about as follows: The home of the family was the Xonta, the sleeping place of the women and the store house for the family possessions. The average building was 20x20 feet, with a depression in the center 12x12 feet and 5 feet deep. The walls were built of cedar planks, set on end ranging from four feet in length on the sides to 7 feet at the highest point of the roof. The second plank from the corner on the right as one faces the river, contains a round hole 18 to 20 inches in diameter about a foot above the ground. This is the place of entrance and is closed by a plank, slid from within. Along the outside walls stones were piled, and a good cobble pavement is made across the front end.

Two stones nicely rounded are placed on end in the pavement at a place convenient to pull oneself out of the round door when leaving the house. A second wall inside the house forming a hall, is placed three feet back. A rude stair fashioned from a plank leads down into the excavation at the corner.

The fire is in the center, in a small depression bordered with stones. Poles are arranged over it, for smoking the fish and venison. On the banks of earth on the three sides, are the food stored in baskets, the implements used in hunting and fishing, finished and unfinished baskets and other possessions. The only furniture were stools made from a section of a tree one foot high. The sleeping place of the men and boys over four years old was the sweat house, an institution exclusively for the men.

This house was lower than the Xonta, usually 18 by 15 in size, and was entered by a rectangular opening. An exit, used to prevent the cooling of the chambers, oval in shape, just large enough for a body to slide through, faced the river. A pit was dug just outside the exit large enough to receive the emerging man. A board covered the pit.

At daybreak the women arose and went to the river for a complete bath. They then brought a load of wood for the Xonta fire before the men were astir. The men were also early risers and

always took a swim in the river. A light breakfast was eaten by the family in the Xonta and each went to his daily task. The man's duty was to make fire sticks, which were whirled rapidly one upon the other, to start the fire. They also brought in wood for the sweat house fire, which was all the time kept going. During the salmon season, the men were engaged in fishing, at other times in hunting. They would make bows and arrows, their fishing nets, pipes and cultivated tobacco. During leisure hours they occupied their time in making trinkets and articles to be used in the dances. The women gathered their materials and wove baskets, ground the acorn meal, cooked the meals, dressed buckskin for clothing and shoes, cleaned and cured the fish.

Perhaps nowhere in the temperate zone has nature provided a better ready made living. The salmon begin to run in April, wild game, elk, deer, quail, are abundant. Varying lengths of the river shore were held by the family as private fishing grounds which descended from father to son. These included one or more riffles suitable for a fishing crib. The women dressed the fish, cutting them in half and curing by smoke. The heads and tails were roasted immediately and highly prized. The salmon eggs were saved and dried for lunch on long walking or hunting trips.

During the warm summer nights, millions of lamprey eels swarmed up the river, and these were caught, drawn, and the skin slit several times, and then hung over the Xonta fire to dry. Acorns were the staff of life, those of the tan bark oak being liked best. They were gathered in baskets 16 by 22 inches in size carried by straps over the forehead. The acorns were placed in the sun to dry and stored in large hampers. After the gathering season was over, shelling was done. When needed for food, the women would grind these acorns into flour with a pestle. A hole is made in clean sand near the river's bank. The meal is placed in this and hot water is poured over the flour until the tannin and bitter taste is filtered away, after which the meal is removed to a water-tight basket by skimming with the palm of the hand. It is cooked in the Xonta by dropping hot stones into the preparation. The men use spoons made out of elkhorn, and the women ate mush with one valve of a mussel. The Hupa also ate hazelnuts, which grow in

great abundance, and the seeds of the sugar pine. The nuts of the pepperwood tree were roasted. For bulbs, those of the lily family, especially soaproot were cooked. During the summer months, all kinds of berries, manzanita, madrone, elder, thimble berries, raspberries, blackberries, gooseberries and currants were eaten.

In the afternoon the old men, and the religiously inclined young men, took a sweat bath followed by a plunge in the river. After the bath they sat in the shelter of the sweat house and sunned themselves, engaging in meditation and prayer.

In the evening the principal meal of the day was served. The men ate slowly, looking about and talking after each spoonful of soup. The women sat in silence, with uncovered heads and hidden feet that they might show respect to the men. A basket of water was passed after the meal, that the men might wash their hands. The evening was spent in talking.

A family consisted of a man, his sons, the wives, the unmarried and half married daughters, the wives of the sons and the grandchildren. The children are seldom punished or handled roughly. The boys, when small, have toys, slings, bows and arrows, and the girls begin to weave miniature baskets and tend to imaginary babies.

The grandmother is the source of wisdom, she imparts the folk lore by day. At night the boys listen to the conversation of their fathers in the sweat house. During the warm weather, beginning in early summer, brush shelters were erected along the river and occupied by the family until fall, when the hunting season began.

The Hupa have four games, one resembles shinny. A second is a guessing game played with a bundle of small sticks, one of which has a black band painted in the middle. The game is to tell in which hand and bundle the marked stick is concealed. The women's game is played with four mussel shell disks which are dropped to the ground from the closed palm. Two points are counted when all four are down, one point when two are up and two are down. A fourth game consists of catching salmon vertebrae on a sharp pointed stick.

Their money was made of shells in strings about twenty-five inches long. Eleven large size shells on a string were worth \$5 each, or \$55. A string of twelve shells was worth \$18, a string of thirteen shells had a value of \$13, and a string of forty-one shells was worth \$7. No smaller shells were used. Valuable property of any kind could be given in barter, but the scalps of the pileated woodpecker (\$1) and the smaller woodpecker (10 cents) had a fixed value. Wealth consisted of the non-essentials of life, such as dance regalia, shell money, etc. The richest man was the leader, as he could settle all disputes or end wars by paying the money equivalent.

A murder had to be paid for in money, and was then condoned, but if not settled the criminal's family were liable to be killed in return. A wife had to be bought and a marriage settlement was made by the groom to the father, and the woman went to live with her husband's family. In case the groom could only pay a small amount of money, he was half married, that is he went to live with his wife's family and this was considered a great disgrace. Children not born in wedlock were "born of the woods" and were slaves and generally ill-treated.

When death came, five days of mourning and purification ceremonies followed. The bodies were buried near the cabin, with the more treasured possessions, broken, beside him. To ward off sickness and death, a number of dances were held.

Most of these dances have been dropped in recent years. The more elaborate were the White Deer Skin, the Boat, the Woodpecker and the Brush Dance. It is interesting to contrast the terrible earnestness depicted on the wrinkled visages of the old men who take part in these ceremonies with the apparent indifference of the young ones, who go through the motions more out of desire to please their fathers than because the superstition has any deep hold on them. It is pathetic to see the very old women as they hobble over the stones, trying to keep pace with the procession as it sweeps down the river, weeping and wailing, no doubt at the memory of old times and of dear friends recalled by the spectacle, and the thought, perhaps, that this will be the last dance they will live to see.

It is indeed fortunate that the customs and languages of these children of nature many of whom are bright and clever and very good people, have been preserved. They represent a savage state through which all humanity has passed, and from which our white race has had to emerge through centuries of struggle and endeavor.

We should have a kindly feeling for the aborigine, help them to become self-supporting, self-reliant and efficient farmers and citizens and allow them their place in the sun.

CHAPTER XXIV

DOWN THE KLAMATH



RINITY RIVER leaves Hupa Valley making a sharp turn to the east and for six miles runs through a deep canyon and flows into the Klamath River opposite Weitchpec. An Indian Rancheria numbering 200 population was located here, the people belonging to the Yurok tribe, or lower Klamath Indians. This tribe controlled the river from Bluff Creek, a point about five miles above Weitchpec down to the mouth. They also occupied the coast from Klamath River south to Little River.

The Karok, or Upper Klamath Indian's domain began at the mouth of Bluff Creek and extended up the river into Siskiyou County; and occupied the valley of the Salmon River as far as the forks. The town of Orleans was their central rancheria, and they are often referred to as the Orleans Indians.

A fairly passable road follows the north bank of Klamath River from Weitchpec to Orleans. A trail, which is gradually being worked into a road continues on to Sommes Bar in the extreme northeastern corner of Humboldt County, where Salmon River, a very large and turbulent stream, flows from the east and joins Klamath River.

The village of Sommes Bar, really just outside of Humboldt County, consists of one long narrow street about twenty feet wide. It is so narrow that a wagon has to be driven outside of town to turn around. It has only one store, a hotel and feed stable, and a few scattering houses.

The sides of the river canyon around Sommes Bar are less abrupt and the hills fall back in gentle lines, with a general growth of beautiful oaks covering their slopes. On the higher plateaus and river terraces there is considerable level land, which is adapted to fruit culture, provided there was some method of marketing the product.

In a country so mountainous and rugged there is very little prospect of communication with the outside world, unless some one of the transcontinental railroads should follow the Klamath from its source in the lakes of Oregon, crossing the Coast Ranges on a water level.

For countless centuries, the Indians have journeyed up and down the river in their redwood canoes, and even now the country is so inaccessible and primitive, that it furnishes the easiest and most convenient route of travel.

Rising in the cold dawn, with the clouds floating over head and the fog covered hills in the distance, the canoe trip down the Klamath River was begun. I sat in the bottom of the boat near the middle in a rather cramped position, as there was not much freedom in moving about. A big middle aged Indian sat in the stern and rowed with a single paddle as he guided the canoe through the waters with his powerful arms. At times he would allow the boat to drift with the current, occasionally dipping the oar to guide.

The Klamath is a large river flowing more water than any other in the state of California, except the Sacramento. Its course through Humboldt County is seventy-five miles long and its direction, where it enters the county, is almost directly southwest for thirty-five miles to its juncture with Trinity River. There it makes a right angled turn and flows directly northwest to the ocean. On account of the mountainous character of the country, the numerous rapids and the force of the current, the stream is not navigable for even light draft river boats.

A celebrated and once dreaded rapid, called Mareep, is located about thirty-four miles from the mouth, but at the present time there is no great difficulty in poling up or paddling down the Mareep Rapids. Within the memory of the oldest white inhabitants, the Indians were accustomed to land at the foot of the rapids and haul their canoes over the bank, as the fall was too great to stem up, and dangerous to run, going down.

The sediment from the placer mining operations has given such added scouring power, that the river in the last fifty years has rapidly worn down the rocks, which consist of dykes of serpentine embedded generally in a soft micaceous slate.

The beds of slate dip at angles from fifteen to forty-five degrees against the stream and form innumerable riffles and small rapids, with stretches of quiet water between.

The characteristic scenes as one journeys down the river is high mountains with open grass covered tops on the ridges, and timbered slopes, on either side of the canyon. The spurs of the ranges rise abruptly from the stream, usually a bare mountain of rock, and on the opposite bank invariably a gravel bed will be found.

The timber in the eastern part of Humboldt near the river consists of a fine growth of oak, laurel and cottonwood; and on contiguous hillsides and ridges are considerable quantities of sugar pine. As one reaches the lower stretches of the river on either side, there is an extensive growth of redwood, spruce and fir of the finest quality, an enormous forest that will give employment to a number of first class lumber mills for years to come.

The area of the agricultural land is very small, made up of flats along the river course.

A limited amount of level dairy land is found near the mouth, rich in the production of grasses, grain, vegetables and fruits adapted to the coast region. A few miles up the river, there is a considerable extent of grazing land not excelled by any in California. The bountiful water supply, healthy climate, and luxuriant native grasses, form a combination which is capable of sustaining thousands of sheep without danger of drouth or severity of climate.

The principal industries of the region are fishing and mining. Every spring and fall there is a rush of salmon of incredible numbers up the river, and the run continues during eight months in the year, which is longer than in any other stream. The canneries are located at Requa near the mouth of the river, and the salmon is of the very best quality. Besides salmon there is an abundance of sturgeon, flounders, salmon trout and candle fish. The Klamath is unquestionably the finest fishing stream on the coast and a sportsman's paradise.

The land is composed of Paleozoic strata of cherts and slates with vast igneous serpentine and granite rocks rising vertically through the Paleozoic, sometimes occupying larger areas than the older rocks. The whole country millions of years ago was tilted

rising towards the east, with numerous fault planes. All the rocks in this region are hard and resist erosion.

The whole of the valley of Klamath has been formed by the erosion of the river during a comparative recent age of the earth. It is hard to believe that the enormous mountains along the Klamath's banks were not thrust up by the folding of earth's crust, but the old river channels and terraces high up in the sides of the canyon's slopes, testify that these hills were formed by the cutting of the river and its tributaries. At Sommes Bar the ancient river was three thousand feet above its present position; at Weitchpec, the old bed lies on the top of the Grasshopper Ridge at 2,500 feet elevation above the present stream.

Placer and hydraulic mining is carried on in these ancient channels. The gold that is now obtained was deposited in the past. At Orleans, benches 400 feet above the present level of the stream are extensively mined.

There are six well defined terraces at Orleans. The modern river channel took about 5,000 years to be cut down; the first terrace took 2,000 years to erode, the second 7,000 years, the third 12,000 years; the fourth 126,000 years; the fifth, 123,000 years, the sixth 80,000 years. This is a total of 360,000 years for the canyon. Above these levels 3,000 feet above the present river is a wider ancient valley from three to four miles wide which carries us back to an uplift which occurred 5,000,000 years ago, and on the tops of Orleans Mountain 6,184 feet above sea level (and Salmon Mountain 6,934 feet) are the remnants of an ancient plain which was smoothed down seven to ten millions of years ago, and it took several more millions of years to wear down all the ancient surface from a mountainous condition.

The river flows a yellow turbid stream through the rugged hills. On every side, the evidences of present and early mining are continuous, high and low bedrock on former water courses are scarred with trenches where the sluices were laid. Piles and walls of smooth rocks mark where the miners have worked with rocker or sluice.

The labor that has been expended is infinite, for many of the bars have been worked over three or four times, and the bed rock and boulders washed clean.

Yet mining in the vast region drained by the Klamath is yet in its infancy. New discoveries of gravel beds will be made, quartz ledges are numerous in the headwaters of Bluff and Red Cap Creeks, and it is known that gold is generally disseminated throughout the whole country.

From Sommes Bar to Orleans, a distance of twelve miles, the Klamath flows through a canyon 3,000 feet deep, the walls of rock made up of schists and shales with dikes of diabase, diorite and igneous rocks intruding.

At Orleans the formation is composed of soft beds of schist, with the result that a valley almost a quarter of a mile wide has been formed, and the higher slopes are beautifully terraced. We float beneath a cable suspension bridge flung across the Klamath, anchored to enormous rocks on either approach. One of these, known as Lover's Rock, is the abode of Cupid. For all old maids and bachelors who ascend its heights will end their single blessedness and a loving couple never return from a trip to the rock without a pledging of their troth.

Orleans Bar is situated on the north bank of Klamath, about sixty miles from the mouth. It is a beautifully located village. The rugged hills seem to have compromised and yielded to an impression of gentler nature and left a level spot amid the mountains on which a city could be built.

Several hundred acres of rich productive soil, dotted with homes surrounded by orchards and gardens, make up the community. The town consists of two stores and a hotel.

The orchards embrace about all the non-tropical fruits, the apple, peach, pear, plum, cherry, grape, fig, apricots, nectarines, mulberry, both black and white, persimmons and every variety of berry. At the lower end of Orleans Bar are several groves of English Walnuts, rather neglected, but they bear abundant crops, and it is said hundreds of bushels of nuts go to waste on the ground every year. The chestnut and black walnut are also extensively planted.

The elevation is 800 feet above sea level and the climate is just about perfect, being sufficiently inland from the ocean and having a moderate rainfall. The isolation is such an adverse factor, that there is no profit in horticulture to which the country is adapted,

on account of the difficulty in getting to market with the fruit. The roads are lined with numerous groves of locust trees hanging full of great white blossoms, ladening the air everywhere with their rich fragrance.

Leaving Orleans, the waters of the river are, at first, fairly smooth, but soon the current becomes more rapid and huge rocks tower above guarding the turbid flood. The Klamath winds like a yellow snake between the perpendicular walls with their beetling rocky points.

Passing Big Bar Mining Claim, one of the most extensively operated mines, we arrive at the mouth of Red Cap Creek, a small stream emerging from the south.

The fall of the river causes a very swift current through the gorge, and the canoe travels at a rapid rate. A few miles on, we landed at Bluff Creek, which flows into the Klamath from the north, and ate our lunch. Shelton Butte opposite the mouth of Bluff Creek rises vertically from the rivers edge. Journeying on, deserted mining camps and claims can be seen on both sides of the river, the old ditches and flumes now disused and going to decay. Saint's Rest, now a rest indeed, is passed.

The scenery is romantic, the dogwood and wild crabapple are now in bloom, and dot the sea of green foliage on the hillsides with patches of white. For all the ruggedness of the section, there are along the south and east bank of the river many hundreds of acres which can be cleared of the brush and converted into agricultural and horticultural land.

Five miles down the stream from Bluff Creek we reach Trinity River and land at Weitchpec. It is quite a populous Indian village but it has gained its name and importance principally from the mining industry. A store and postoffice with two or three farms are operated by white people and these comprise the population, other than the Indians. Numerous Indian houses, mixed in architecture, primitive and modern, line the river banks. A stick game contest between the Indians of Weitchpec village and the Indians down the river was being held on a flat sand bar. The game is like the modern shinny, using clubs, and knocking a chunk of wood between goals much like football. The onlookers are as much excited

as the players and a great deal of betting is done on the result of the game.

Leaving Weitchpec the current of the river becomes very rapid, the water of the Trinity laden with yellow debris adding greatly to the volume of the stream. The three miles to Martin's Ferry are soon covered, where we landed to pass the night. Here the main county road from the coast over the Bald Hills crosses Klamath by a suspension bridge. It is the only outlet for all the vast country in northeastern Humboldt. The road has been completed a few months, and former conditions of isolation were evidently appalling.

The Martin's Ferry ranch is a perfect wilderness of fruit and garden products. A cherry tree whose trunk girted eight feet four inches in circumference has been a most prolific bearer for over forty years. The region was settled during the early mining days of '52 and '53, and is the oldest mining country in northern California, and yet is probably the most isolated.

There is some peculiarity about the climate or atmosphere of this particular spot which makes one sleep as sweetly as if he were in the realm of fairies.

CHAPTER XXV

“FROM MARTIN’S FERRY TO REQUA”



It is thirty-seven miles to the ocean and one has to start early in the morning to make the trip in one day. Soon after leaving Martin's Ferry the current becomes a veritable avalanche between mountain walls as Mareep Rapids is reached. The waters rush through the upper rapids in a tumbling mass resisted by bluffs and rocks. Coming out of these there is a short distance of a mile, where the river is fairly smooth. The lower rapids then are reached. At the upper extremity a large rock stands midway of the stream, and the water fairly pours and boils on either side and below. The canoe rushes down between the rocks, and the Indian skilfully avoiding them, sometimes paddling with all his strength to avoid the jutting boulders.

Shooting the chutes has about the same thrills with the rocks removed. In an incredibly short time, we are through the rapids and in the still, quiet stretches.

According to the Indian lore and traditions many remarkable events have happened here. Every rock and stream and lake has its fable, myth and romance.

The villages of the Yurok are numerous, after leaving Weitchpec and there must be at least 500 people of this tribe living along the banks, on the little flats.

There are twenty or more villages in the thirty-five miles, the first being Warseck, nearly as large as Weitchpec, located on the right or north bank of the river, opposite Tuley Creek, which is the first tributary after passing Mareep Rapids. The Indian names mean in English some object along the river, such as fishing weir, a riffle, or level spot, etc.

About five miles we pass the former town of Klamath or Klamath Bluffs. There used to be a store and postoffice, but no one could



The mighty Klamath River. Grinding away at the roots of the mountains. In a Redwood clad jumble of hills. Home of the Yurok, the center of the world to them.

be persuaded to carry the mail after the proprietor of the store died and his successor was shot.

In early days Klamath Bluffs was a lively mining camp engaged in washing deposits of gold in the terraces on bluffs about 380 feet above the river level. This deposit is of the same character as the sands exposed at Gold Bluffs, and is a bed composed of alternate layers of sand and gravel nearly one hundred feet in thickness. The bed rock is the same soft slate seen along the river and is worn into pot holes and grooves by the old eddies.

Above the bedrock was a strata of blue gravel from five to sixteen feet thick, which contained the richest and coarsest gold in pieces flat or oblong in shape and averaging two or three cents to the pan.

The place is now deserted except the rancheria of Indians which number about one hundred people.

From their point of view, mining has been the ruination of the country. In ancient days the waters were sparkling clear, the channel was deep and narrow, and the bordering alluvial flats were covered with beautiful black oaks and tan bark oaks, where also luxuriant grasses grew.

During the winter months when the mountains were covered with snow, the deer and elk came down to these lowlands, and among the shelter of the groves, grazed and were hunted. Now the elk has all but disappeared, his bones are withering in the forest and on the hillsides; and with him are gone the feeding grounds.

The miner tore away the banks with his pick and shovel and of recent years, with the powerful hydraulicing monitors and giants he ravished the bosom of nature until she pined and died. The once pure water of the river is polluted with debris, the salmon do not come as once they did, the channel is widened, the productive flats were washed away with their groves of oak in the winter freshets. Mounds of sand and gravel are cast upon the shores and there are barren places where nothing can grow.

Deserted are the villages, which were ten times as numerous then as now. A destructive plague similar to cholera, swept away two-thirds of the Klamath Indians just before the white men came. Ten years after the advent of the whites, a series of Indian wars

still further diminished their numbers, and strange diseases of the whites have all but completed the work of extinction.

Many canoes pulled up on the banks, left to the elements to decay, are the signs that the old Indians are at rest and forever in their graves. The younger generation is fast adopting the ways of civilization, and barbaric man is passing on.

At the mouth of Roach Creek, a stream flowing from the south, we have now entered that wonder of the world, the majestic forest composed of redwood, cedar, Oregon pine, spruce, sugar pine, pepperwood, maple and white oak. As we near the coast the redwood becomes the predominant tree, and so magnificent is the growth bordering the river fifteen miles from its mouth, that the Ah Pah Creek timber has been proposed as a National Redwood Park.

Numerous tributaries of the Klamath flow in from the north and south, the largest being Pekwan Creek, where one of the largest villages is located. Four miles beyond Pekwan we landed on the flat at the mouth of Tectah Creek where we ate our lunch. Surpur Creek is reached, with an Indian village of the same name three miles beyond. The place is sometimes called Johnson's. On down the river is the Indian settlement of Wahteck, with a population of over one hundred people, located at the foot of the great Wahteck Mountain.

Riding through the redwood clad mountains, the vista ever changing yet very similar, we finally reach the mouth of Blue Creek, with Ah Pah Creek entering from the south just opposite. Blue Creek drains a large territory of very mountainous country, running through gorges that are unapproachable except with ropes and ladders, and heads at Blue Mountain, where Doctor Rock rises abruptly one hundred feet from its highest point. It is a famous hunting ground for bear and deer. A few miles more we pass out of Humboldt County into Del Norte. We float for miles by Omagaar and Turup Creeks and reach McGarvey Creek, down which the northern extension of the railroad will come. On the opposite and north bank of Klamath is Turwah Bottom, situated in a bend of the river and over a mile long.

From this point on to the mouth, which is about seven miles, the river winds its serpentine course until it reaches the coast. In

the neck or concave of each bend are these bottom lands, from a half a mile to a mile and a half in width. In all there are over 5,000 acres of the best bottom land in the state.

I wanted to see the country, so I left the canoe, besides riding in a boat in a cramped position made walking desirable.

The land is used as a dairy ranch with fields of white clover. In the warm sun of a June day, with evidence of civilization on every hand, a feeling of welcome relief from the isolation of the country we have just left is experienced.

Below Terwah and on the east side of the river is Waukel flat, a large and valuable bottom. Hoppow, on the west side comes next, and crossing this bottom, the boat has been waiting, and the rest of the journey is completed by water. The tide runs up to this point, and the river widens out into an estuary three-fourths of a mile wide and four miles long, studded with islands. Passing Hunter's Creek, we land at the town of Requa, located high up on the north bank. This has probably a population of one hundred, one-half white people, and is quite a trading village. Its principal industry is salmon canning.

The river debouches upon the ocean from between bold and high headlands, about three-fourths of a mile apart. A sand spit running in from the south, causes the volume of the stream and the ebb and flow of the tide water, to pass through a narrow channel on a line with and close to the north bank of the river. The scene is beautiful. The Pacific Ocean is bounded only by the horizon; the line of beaches covers along the Humboldt coast to the south, as far as the eye can reach. Back of the coast line, the bold high hills covered with fern, grass and chaparral are piled one on the other, commencing immediately at the beach rises 1,000, 1,500 and 2,000 feet above the ocean's level.

To the east the winding Klamath comes seaward, enclosed by abrupt, timbered hills, presented one after the other, growing more distant and dim as your eye follows up the course of the stream until they become a blue, unbroken ridge against the horizon. The journey is done, the Klamath has been unlocked.

How much topography and simple natural formation has to do with the development of any country. Had the pitch of the beds

of slate been with the stream and the rocks not quite so hard, the Klamath River would have cut down a broad wide valley; there would have been no riffles or rapids. It would be a navigable stream reaching far into the heart of Northern California. As it is, the river has had to fight against the formation for millions of years. During this time the land has been elevated thousands of feet, and quintillions of tons of rock and earth have been removed, leaving the rough and sculptured land of northern Humboldt.

The Klamath was discovered in 1851, and a city was started on the flat land on the northern side. Streets were laid out, with liberal reservations for schools, public squares and buildings. Twenty feet of water at low tide had been found in the entrance and the thousands of miners on the upper stretches of the river needed supplies. Klamath City gave promise of becoming the metropolis. But the next winter filled the channel leaving a depth of only five feet, and little gold was found in the lower stretches of the river. The country near the mouth is a dense jumble of hills, through which no roads could be built.

A county was organized in 1851, comprising all the territory between the mouth of Mad River and the Oregon line, from the ocean to the summits of the Coast Range and the name Klamath given to it. Trinidad with 3,000 population, became the county seat.

Humboldt County was created in 1853, carved from the western portion of Trinity County and the part of Klamath County south of an east and west line through the mouth of Mad River. Arcata, then called Union, became the county seat of this new political division.

The large population of Trinidad dwindled to none by 1853, due to the puncturing of the Gold Bluffs bubble, and also to the nearness of Arcata to the mines. The archives of Klamath County were removed to Crescent City, which became the county seat. The legislature ratified the action of the county officials in January, 1854. Crescent City was a considerable distance from the mines on the Klamath, so in 1856 the county seat was removed to Orleans Bar.

This dissatisfied the people living around Crescent City, with the result that in 1857, Del Norte was formed from the northern part of Klamath County.

The population of Klamath County steadily declined each year thereafter due to the working out of the mines and general hard times, until 1873, leaving out the Indians, there were only 300 people, and not enough taxes could be collected to pay the salaries of the county officials.

In 1874, the legislature blotted out Klamath County and annexed the dismembered portion to Siskiyou and Humboldt. Thus passed the city and the county. The grand, majestic Klamath River, which has for ten million years occupied practically the same course as now, surviving the uplifting of the Coast Ranges and sawing its way across the ridges in order to reach the Pacific, still grinds away at the ledges of rocks, the roots of the old mountains.

CHAPTER XXVI

THE RAILROAD



THE old order passes. Humboldt has been presented as it was prior to 1914. Up to that time, it was an isolated country; a self-supporting and self-sufficient state. True it was connected with the seven seas, and our products went to every portion of the globe. But Humboldt was not an integral part of the United States and it was not closely connected with California.

For sixty years the people of Humboldt dreamed of a railroad. Three distinct, soul shaking, and pocket-book breaking real estate booms excited the citizens and caused them to buy property from one another. Each time rumor only was at the foot of the rainbow.

Eureka possessed in 1907-08 a mayor who suffered severe criticism during his life time and term of office from many people of varied points of view; but in one instance, he was the man of the hour and the man for the place. No other individual in Humboldt would have dug down in his own pocket for the expenses, rushed down to San Diego and engaged in the seemingly hair brained expedition, that Hiram L. Ricks undertook and put over.

Second to him, the gratitude of Humboldt citizens for many succeeding generations must go out to E. H. Harriman, a genius, living a hundred years ahead of his time. In this year of our Lord, 1923, the Interstate Commerce Commission, Supreme Court of the United States, and the other citizens of America, have at length swung around to Harriman's point of view and are engaged in the consolidation of the western United States railroads.

The third factor in the building of the railroad to Humboldt was the fire of 1906, which destroyed the records of the surveys made by the Southern Pacific Railroad. Had these been available, it would have been deemed that a railroad to Humboldt would

be a losing proposition, and the road would never have been built.

The World War has so depreciated the purchasing power of money that no railroad official in 1923 would approve of the building of our railroad. All this could not have been foreseen in 1908. At that time the Southern Pacific Railroad's treasury was overflowing with money. A nod of a Czar ordered the work started and loaned the money of the Southern Pacific to the Northwestern Pacific.

Harriman in a general way was familiar with the proposition but Ricks went to him and had a personal interview for fifteen minutes, sold Humboldt and Harriman ordered it done.

Hiram L. Ricks deserves unstinted credit for his salesmanship. He was one of the sons of the founder of Eureka, and in spite of many deficiencies, he had the interests of his native land at heart and was honest in his opinions.

The building of the railroad was a triumph of engineering but its construction was a long drawn out process. Enormous slides were encountered. One considerably more than three miles long, forced the builders to change the route to the eastern side of Eel River.

The mountains were pierced, hills were leveled and canyons filled. Gorges were bridged. The primeval forest was cut in twain. Man grappled with nature and man triumphed.

At a cost of three times the estimate, and after a period of twice as long as contemplated, the last spike was driven. Special trains from Eureka and San Francisco met. A hushed and reverential feeling filled the breast of the writer as he stood among the throng of 500 people, watching the golden spike driven by the silver hammer into the last burl redwood on October 13, 1914.

Hope long deferred makes the heart sick. Joy came that morning when the link was welded that brought dear old Humboldt into rail contact with the outside. No more sickening journeys necessary. The lover of an ocean voyage still has at his disposal the boats which will carry him from Eureka to San Francisco. But the Mendocino coast is as stormy as any in the temperate zone. The size of the lumber schooners is so small that unless one is a hardened

sailor, the trip means agony. Now the business man can take the sleeper, transact his affairs in San Francisco and return with the loss of but one business day.

For those who enjoy scenery, the daylight journey is a revelation. The vast majority, unacquainted with the beauties of northwestern California, will make San Francisco their starting point.

The ferries transport us across the unrivaled Golden Gate to Sausalito. Here we take a train and ride through one of the loveliest parts of California with Richmond and San Pablo bays on our right and Mt. Tamalpais, the sleeping maiden, on our left. We go through a tunnel and arrive at San Rafael, the county seat of Marin county. Three hundred days of sunshine each year, a sheltered location, a beautiful countryside and an ocean tempered climate are here offered to the lovers of nature and the great out doors. Just beyond San Rafael, we enter another long tunnel and emerge upon the lovely Nicasio Valley. We pass Petaluma, the largest center of the chicken and egg business in the United States.

A short distance beyond is Santa Rosa where Luther Burbank lives. The railroad next crosses a divide to the Russian River Valley which it follows for nearly one hundred miles, passing through a country which is sparsely settled when the resources, which are open to settlement and development, are considered. Through towns of Healdsburg and Cloverdale the route brings us finally to Mendocino County through which the railroad passes for nearly one hundred and twenty-five miles. The chief towns along the road are Hopland, Ukiah and Willits.

Beyond Spy Rock the railroad runs through the extreme southwest corner of Trinity County. The railroad has been following along Eel River ever since leaving Willits. The foaming water, quiet pools, blue slides, rocky promontories, wooded slopes, and grassy openings give a foretaste of Humboldt beyond. Just after leaving Kekawaka, we arrive at the boundary line between Trinity and Humboldt Counties.

The first town of any importance in Humboldt County is Alder Point, which is located at the crossing of the old mail route county road over Eel River. Fort Seward is the next important point reached. Fort Seward was promoted just before the railroad was

built, and the promotion has not as yet resulted in anything. It has merit and eventually will become the most important inland city.

On Brock Creek is located a very good ranch, which shows what can be done with this portion of Humboldt County. At Eel Rock many people have located their summer homes. The railroad crosses the main Eel River at South Fork and then continues on the eastern side of the river to Shivley and towns of Eel River Valley. Leaving Loleta we journey under Table Bluff through the last of the thirty-five tunnels, skirt the shores of Humboldt Bay, arriving at Eureka—two hundred and eighty-four miles from San Francisco.

One improvement leads to another. By means of the new State Highway, an unrivaled trip by auto can be made from San Francisco through the northwestern counties to Eureka in one day.

It is better to take two days, stopping over night at one of the resorts which are on the road. The highway follows the railroad until Laytonville in Mendocino County is reached; when, instead of following the main fork of the Eel River as does the railroad, the auto road runs west across Long Valley to the south fork of Eel River. Here the country is similar to Humboldt twenty miles to the north. The magnificent redwood forest with its parks and open prairies, and the river with its rocky bluffs, sandy gravel beds and winding turns becomes one's constant companions. At last one comes to the monument which marks the south boundary of Humboldt County and the fortieth parallel of latitude. The road leaves the south fork and turns north along East Branch Creek and up a grade. At the top, we view the valley in which Garberville lies nestled. This portion has been described in preceding chapters. Only now the distances seem shorter.

It used to be a day's journey; now in four hours Eureka can be reached. Up the enormous grade, creeping along the sand bluff high above Eel River, the State Highway wends its way. Beautiful Bear Buttes stand out boldly as of yore. Down grade we pass through camping grounds among the redwood groves on the flats, out into the sunny smiling openings in the forest at Phillippsville and Miranda and through the State Redwood Forest, a monument

to the wise forethought and generous donations of our citizens. When the people of Humboldt awaken to their true destiny, they will become the host and the landlord to throngs who will visit the Redwood Wonderland and nature's vacation ground.

ALEXANDER HUMBOLDT

Let us lay a wreath upon the monument of the man from whom Humboldt got its name. No fitter tribute could be paid to one of the great men of the world than to name after him one of the great sections of the earth which Humboldt loved to explore. From his youth he had a passion for the sea. He longed to view nature in her wildest and most rugged forms. He traveled the mountains, the plains and deserts of America and Asia, studied the form of the earth's crust, and was learned in all the known sciences. Giving to the world a series of sixty-one free lectures, which are printed and the book is known as *Cosmos*, he presented a scientific picture of the world. "The Universe is Governed by Law" was his theorem.

That like conditions produce like results, and natural phenomena are incapable of change. To Alexander Humboldt, more than any other leader in the realm of thought, is due the general advancement of the last one hundred years in our sciences. He taught his fellow man to think. He destroyed ignorance and prejudice. He established a standard of truth. He investigated and obtained the facts. He showed that man could conquer any adverse condition of living on this globe. By definitely ascertaining the facts concerning the enormous forces of nature around him; the giants of magnetism, electricity, water, heat and light could be harnessed.

Man has become the master of his environment only within the past one hundred years and ceased to be the abject cringing slave—afraid of the thunderbolt, terrorized by the storm, thrust into savagery by the tropics, or clinging to the tiny locality in which he happened to be born. Before Humboldt, the world, to the ordinary man, was like an enchanted forest full of demons ready to devour, filled with savage races, through which he stumbled weary and without definite goal to death. Nature was in a conspiracy to destroy man and his effort by flood, earthquake, tempest, frost and storm. Humboldt showed that knowledge consists of ascertaining

the laws of nature, and by working in harmony with natural forces, mastery of them is a result.

Humboldt was a lover of nature. Nowhere does nature display her finer charms than in this land of the ultimate West, its beaches laved by the waters of the Pacific. Bejeweled with bight and bay, by mountain chains and valleys between, clad in her vesture of green, mantled with the forest, Humboldt County awaits the new-comer. She is ready to bestow Contentment, Happiness and Wealth.

WISHING YOU PLEASURE AND PROFIT FROM

THE READING OF THIS BOOK, I AM

VERY TRULY YOURS,

A handwritten signature in dark ink, reading "W. L. J. Humbley." The signature is written in a cursive style with a long, sweeping underline.

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PACIFIC



HUMBOLDT COUNTY CALIFORNIA

Scale of Miles
0 10

O C E A N



